

Quaderni di finanza

# Women on boards in Italy

*M. Bianco, A. Ciavarella, R. Signoretti*



**CONSOB**

COMMISSIONE NAZIONALE  
PER LE SOCIETÀ E LA BORSA

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# Women on boards in Italy

M. Bianco\*, A. Ciavarella\*\*, R. Signoretti\*\*

## Sintesi del lavoro

Il Quaderno analizza la composizione di genere degli organi di amministrazione delle società quotate indagando, in particolare, se alcune caratteristiche delle società possano influire sulla probabilità che almeno una donna amministratore sieda nel *board*.

La presenza femminile riguarda ancora una quota minoritaria del mercato azionario italiano e un ridotto numero di amministratori. Le evidenze mostrano come essa sia inoltre associata ad alcune caratteristiche delle società e delle amministratrici stesse, in particolare all'esistenza di legami di natura familiare con l'azionista di controllo.

Dall'analisi degli organi amministrativi emergono infatti due modelli molto differenti. Da un lato, la presenza di amministratrici che hanno legami familiari con l'azionista di riferimento è più frequente in società di minore dimensione, a proprietà concentrata e operanti nel settore dei consumi. Dall'altro, amministratrici non legate all'azionista di controllo siedono nei *board* di società a proprietà diffusa o estera, operanti nei settori dell'*information technology* o delle telecomunicazioni e caratterizzate da amministratori più indipendenti e mediamente più giovani. In entrambi i modelli la presenza di investitori istituzionali nell'azionariato rilevante e la dimensione del *board* influiscono positivamente sulla probabilità che vi sia almeno una donna amministratore.

Infine, l'analisi approfondisce l'esistenza di eventuali relazioni tra presenza femminile e alcune misure di *performance* e buona *governance* delle società. Mentre non sembra emergere alcuna relazione statisticamente significativa quanto alle prime, il legame tra presenza di amministratrici e alcune semplici *proxy* di buon funzionamento del *board* è negativo. In particolare, la partecipazione media dei consiglieri alle riunioni e il numero di queste ultime sono inferiori nei consigli di amministrazione in cui siede almeno una donna, sebbene quest'ultimo risultato sia principalmente determinato dalle amministratrici aventi legami familiari con l'azionista di controllo.

\* Banca d'Italia; \*\* Consob.

Le opinioni espresse sono personali e non impegnano in alcun modo le istituzioni di appartenenza. Si ringraziano Marcello Bianchi, Clara Graziano, Fabiano Schivardi, Giovanni Siciliano, i partecipanti alla Conferenza IFABS 2011 (Roma, Università Roma Tre, 30 giugno-2 luglio 2011) e al Workshop "Il genere entra nell'economia" (Roma, Banca d'Italia, 26 Settembre 2011) per gli utili commenti.

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# Women on boards in Italy

*M. Bianco\**, *A. Ciavarella\*\**, *R. Signoretti\*\**

## Abstract

In this paper we investigate the state of the art of women representation in Italian corporate boards, trying also to assess its determinants. We find that female presence still concerns the minority of companies and a small number of women. Moreover, female directorship is associated to some characteristics of firms and of women themselves, depending in particular on whether they are related (through family links) to the controlling agent. Two very different models emerge. On the one hand, family-affiliated women are more present in smaller companies, with a concentrated ownership operating in the consumers sector. On the other hand, not-affiliated women are more common in widely held companies or in firms owned by a foreign shareholder, in the IT/telecommunication sector, and in companies with younger and more independent boards. In both models the presence of institutional investors and board size positively affect female representation. Finally, we investigate possible relationships between gender diversity and some performance and governance outcomes. While we find no correlation between women representation and performance, the relationship with some "good governance" proxies seems to be negative. Specifically, the average board attendance and the number of board meetings are lower in diverse-board companies, though the latter result is mainly driven by family-affiliated women.

\* Bank of Italy; \*\* Consob.

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## 1 Introduction

The Italian labor market is characterized by a very limited women participation. As the Global Gender Gap Index<sup>1</sup> shows, Italy is one of the lowest-ranking countries in the EU as for the size of the gender inequality gap, and its rank deteriorates further over the last year<sup>2</sup>. The percentage of female employees in Italian private companies is among the lowest (30%), with only India, Japan, Turkey and Austria performing worst<sup>3</sup>.

In Italy women seem to experience both a horizontal and a vertical segregation. At the horizontal level, Italian women are active mainly in education and health, in the manufacturing sector, in textile and clothing, while they are almost absent in other industries. At the vertical level, female employees tend to be concentrated in low or middle-level positions. However, looking at a sample of the largest companies<sup>4</sup>, Italy shows one of the highest percentage of female CEOs, together with Finland (13%), Norway (12%), Turkey (12%) and Brazil (11%).

The importance of diversity in corporate boards has been demonstrated in light of the agency theory and in the resource dependence framework. Both theories claim that individuals' characteristics can influence the ability to monitor and advise the inside directors and provide outside connections.

According to the former, a heterogeneous board is a stronger monitor of executives behavior in the interest of the shareholders. This is grounded on the fact that diverse people may have different backgrounds and bring different viewpoints to board oversight (Anderson et al., 2009; Adams and Funk, 2010). Being generally excluded from old-boys networks, female directors might enhance board independence of thought and monitoring functions (Adams and Ferreira, 2009; Rhode and Packel, 2010).

The resource dependence framework considers directors as providers of important resources to the firms such as connections with the outside environment, advice and counsel (Pfeffer and Salanick, 1978; Ferreira, 2009). The more directors can provide a breadth of resources including different professional backgrounds, perspectives, problem-solving skills, the more they will be able to endow top managers with valuable advice and counsel (Anderson et al., 2009; Terjesen et al., 2009).

Someone suggests that females might be appointed as "tokens". Tokenism may hinder the beneficial role of female directors, since women minorities in groups may be subject to discriminating behaviour (Kanter, 1977). In fact, not only the pres-

- 1 The Global Gender Gap Index was introduced by the World Economic Forum in 2006 as a framework for capturing the size of the gender inequality gap across countries in four areas: (i) economic participation and opportunity; (ii) educational attainment; (iii) health and survival; (iv) political empowerment.
- 2 Italy ranking in 2010 is 74, while in the 2009 it was 72. Considering only the sub-index related to the area "economic participation and opportunity", Italy ranks 97th (The Global Gender Gap Report, 2010).
- 3 India is the country with the lowest percentage of female employees (23%), followed by Japan (24%), Turkey (26%) and Austria (29%).
- 4 The Corporate Gender Gap Report (2010), p. 5.

ence but also the number of women directors is crucial and a critical mass, which means at least two of them, is deemed necessary to be significant influencers (Konrad et al., 2008; Elstad and Ladegard, 2010).

Many researchers have tried to measure the effects of female representation on both governance and financial performance outcomes. However, no conclusive evidence on how gender diversity affects performance exists so far.

As for the effects of diversity on the adoption of good governance practices, a wider female representation has been found to be associated with stronger attention to the handling of conflict of interests and boards with two or more women make more use of search consultants (Brown et al., 2002). A recent study on a large panel of U.S. boards finds that gender diversity has a positive effect on some board practices associated with good governance. The greater the percentage of women in the board the higher the attendance of male directors, the number of board meetings and the pay-for-performance (Adams and Ferreira, 2009). These results suggest that diverse boards are indeed stronger monitors. Finally, a recent contribution supports the idea that gender diversity is beneficial for shareholders by demonstrating its positive influence on a firm's general orientation towards shareholders (Adams, Licht and Sagiv, 2010).

Much of empirical research on gender diversity has focused on its effects on performance measures, though with mixed evidence. While some authors find a positive relationship between gender (and ethnic) diversity and Tobin's Q or accounting measures of performance (Erhardt et al, 2003; Carter et al., 2003), others do not reach statistically significant nor conclusive results. The impact of diversity varies with firm characteristics: it may be beneficial in some but detrimental in others. According to Anderson et al. (2009), board diversity (including gender) positively affects the performance of more complex firms but has detrimental effects in less complex organizations. Adams and Ferreira (2009) find in general a negative relationship between gender diversity and both Tobin's Q and ROA. However, the latter result changes when controlling for firm's governance, as measured through the G Index, by Gompers et al. (2003). The authors conclude that in firms with weaker shareholders' protection, gender diversity positively affects performance while in well-governed firms additional monitoring (i.e. that exerted by diverse boards) is negative.

However, the results of the studies on the effects of gender diversity have to be taken carefully, since they usually suffer from endogeneity problems as well as for reverse causality. For example, results on the impact of female directorship on corporate governance measures could be driven by differences in some unobservable firms characteristics, such as corporate culture<sup>5</sup>, more than by gender diversity. Moreover, the reverse causality problem makes it difficult to give a causal interpretation to a positive coefficient on the proportion of female directors on performance or on governance outcomes since, as Rhode and Packel (2010) point out, "*correlation does not indicate causation*".

5 As Adams and Ferreira, (2009) point out: "*it is plausible to assume that some firms are more progressive than others, so they have both better governance, as well as more female directors*".

The gender diversity issue is not only central among scholars but it is also driving a longstanding debate on quotas which is leading a number of European countries to introduce some kind of compulsory quotas. After the leading example of Norway, gender quotas are currently on the agenda of rule makers around the world who are starting to lose patience with companies scant progress in increasing female representation (Catalyst 2010; EPWN, 2010). Table 1 summarizes the state of the art of gender diversity regulation across Europe.

In Continental Europe, most countries have mandated gender quotas or are discussing such a provision. Countries that had initially taken a softer approach by addressing this issue in corporate governance codes, have moved towards compulsory quotas also or are debating on doing so. In Italy, the one-third gender quota has been recently approved by the Parliament<sup>6</sup> after a long debate.

Quotas regulation are generally justified on the basis of equality and fairness grounds. Nonetheless, imposing constraints on board composition may affect firms' value and raise costs in terms of restricting the possibility of appointing the best available candidate (Adams, Gray and Nowland, 2010).

From a theoretical point of view, if firms define their board structure in order to maximize their value, any regulatory constraint should be detrimental. However, if board structure is chosen to maximize the private benefits of insiders, diversity can increase firms' value (Ahern and Dittmar, 2010).

Though there is limited evidence on the effects of the introduction of compulsory quotas, a study on Norway finds that, consistent with the expected reorganization of boards, market reaction to the first announcement of the law is negative for all-male board companies and positive for those that have at least one female director (Ahern and Dittmar, 2010). The authors also document a negative effect of the new regulation in terms of Tobin's Q. Another research on the Norwegian market finds that quotas increased labor costs and employment levels while reducing short-term profits (Matsa and Miller, 2010).

Costs and benefits arising from quotas are difficult to identify. On the one hand, the increase of female representation induced by gender quotas may have potential positive effects as shown by the literature. On the other hand, the selection of new directors is not free of risks if either not enough experienced women are available or inadequate selection process leads to reduced board quality. Female directors appointed in Norway as a consequence of the new law provisions are found to be younger, less experienced and more stakeholder-oriented (Ahern and Dittmar, 2010; Matsa and Miller, 2010).

Also to inform this debate, it might be useful to investigate corporate drivers of gender diversity. This might help understanding how the selection mechanism worked until today and provide a guide in interpreting possible further developments. This paper sheds some light on female representation in Italian corporate boards, by

6 The proposed law was first passed by the Italian Senate on 15<sup>th</sup> March 2011 and finally approved by the House of Commons on 28<sup>th</sup> June 2011.

taking into account the peculiarities of the Italian corporate control models. We consider all directors of Italian publicly-traded firms at the end of 2009 and investigate the main characteristics of Italian female directors, as well as potential determinants of diverse boards. We take into account both the characteristics of the firms and those of female directors, specifically their affiliation with the controlling shareholder. Moreover, we look at the correlation between female directorship and some governance and performance measures, in order to get some insights on the possible effects of gender diversity.

We find that female directors in Italy are still gold dust, since at the end of 2010 only 6,8% of total board seats was held by a woman and the majority of listed companies had all-male boards. However, both the number of female directors and that of companies where at least one board member is a woman are steadily (but slowly) growing.

When considering women's affiliation with the controlling agent, we find a pervasive presence of women directors with a family connection with the controlling shareholder: in 47,3% of diverse-board companies female directors are exclusively family members and in further 9,3% there is at least one family-affiliated woman. We also investigate the peculiarities of family and non-family women directors, with reference to their level of education and the role in the board. "Family" directors are on average less educated than not-affiliated women directors: the proportion of graduated women is much higher in the non-family group than in the other one (95% vs. 60%).

As for the role, we find that only a minority of female directors is an independent director, whereas in almost half of the cases women are non executive directors and in one case out of three they have an executive role. Both executive and non-executive positions are generally held by a family-affiliated woman, while non-family women are usually independent directors.

These descriptive statistics provide evidence of a twofold nature of female representation in the Italian market, which is confirmed by the econometric analysis we perform in order to shed a light on the relation between some firms characteristics and gender diversity. Two very different models emerge. On the one hand, family-affiliated women are more present in smaller companies, with a concentrated ownership and which operate in the consumers sector. On the other hand, not-affiliated women are more common in widely held companies or in firms owned by a foreign shareholder, in the IT/telecommunication sectors, and in companies with younger boards and a higher proportion of independent directors. In both models the presence of institutional investors and the size of the board are positively related to female representation.

Finally, we try to assess possible effects of women presence on some governance related outcome and on some performance measures. Given the small number of women and the absence of panel data, we simply investigate the correlations existing between these variables and gender diversity. We find no correlation between women directors, jointly considered or classified according to family affiliation, and

companies' performance (as measured by Tobin's Q and stock volatility). In terms of "good governance" measures, the effect of gender diversity seems to be negative. Specifically, the number of board meetings and the average board attendance are lower in firms where at least one female sits in the board. However, as for board meetings, it seems that the negative effect of female directorship is mainly driven by family-affiliated women. In fact, the average number of board meetings is higher in firms where not-affiliated women are present than in companies where only family directors are in the boardroom, and the difference is statistically significant.

To the best of our knowledge, this is the first paper trying to investigate the determinants of women representation in Italian corporate boards and its relationship with governance and performance outcomes, also providing an up-to-date state of the art of diversity in Italian corporate boards, right before the implementation of the new gender quotas regulation.

The paper is organized as follows. Section 2 provides some descriptive statistics on female representation in Italian publicly traded firms. Section 3 illustrates the results of the analysis of company-level drivers of the presence of female directors. Section 4 looks at the relationship between women presence on board and financial and corporate governance outcomes. Finally, section 5 concludes.

## 2 Women in Italian corporate boards. Descriptive statistics

### 2.1 Female representation in the Italian market

The appointment of women in Italian corporate boards has grown in recent years. As shown by Table 2, both the number of female directors and that of companies where at least one board member is a woman have continuously increased from 2004 to 2009. However, female representation still appears to be low since at the end of 2009 only 6,3% of total board seats is held by a woman and the majority of listed companies have all-male boards. The numbers for the year 2010 confirm the slow upward trend (6,8% at the end of the year).

Figures on women representation in Italian corporate boards are far below those shown in the United States - where the percentage of female directors is 15,7% - and in Scandinavia - with nearly 24% of women in Sweden and Finland and nearly the required gender quota of 40% in Norway (Catalyst, 2010).

By looking at the number of female directors, the picture does not change. Table 3 highlights the very few cases of more than one female director in a corporate board, i.e. 34 firms representing less than 15% of total market capitalization. The most frequent scenario in diverse board is therefore the presence of one female director, occurring for 95 companies which represent 20% of market capitalization. Only 6 companies have more than 3 female directors. This situation is often considered as evidence of tokenism.

## 2.2 Company characteristics: size, industry and control model

When looking at the market value of firms, it appears that all-male board companies represent the large majority of the market (66,5%), suggesting that firms where women are represented in the boardroom tend to be smaller caps.

This is confirmed in Table 4, which shows the breakdown of women representation by market index. Even if their boards are significantly larger, blue chips (firms in the FTSE Mib and Mid Cap Indices) show lower female representation both in terms of percentage of companies with diverse boards and weight of female directors. Female representation is higher in the Star index, comprising midsize companies subject to stricter requirements regarding transparency, liquidity and corporate governance<sup>7</sup>. However, the highest figures on women involvement in the boardroom are shown by smaller caps, i.e. firms not included in the mentioned indices, where in almost half of the cases women are present and their average weight in the board is more extensive.

Overall, these preliminary results on the relationship between size and gender diversity appear to differ from the theoretical hypothesis and empirical findings supporting the idea that firm's size is positively related to gender representation (Hillman et al., 2007; Peterson and Philpot, 2007; Adams and Ferreira, 2009).

The evidence on the relationship between industry and female representation shows that the latter is relatively high in IT/telecommunication sectors and consumer products industries in terms of average presence (Table 5). These industries appear to be characterized by smaller boards with a higher presence of women.

Table 6 illustrates how different control models are associated with different gender representation. This is of particular interest in the Italian context where the large majority of listed companies is controlled by a single agent, coalitions are gaining importance and disperse ownership is still a characteristic of a few companies (Bianchi and Bianco, 2007; Bianchi and Bianco, 2008).

The evidence in Section A suggests that in companies controlled by a single agent (either by a private or a public agent) women are more present both in absolute (in half of the companies with an average number of 0,68 female directors) and relative terms (on average, 7,6% of the board). On the other hand, more dispersed ownership structures, such as coalitions<sup>8</sup> and widely held companies, are associated with lower female representation.

Section B of Table 6 provides another classification of the market which distinguishes companies with family control (either by a single shareholder or a coalition) from the others. Results point out that if a family is the controlling agent, fe-

7 More specifically, companies in the Star segment have a capitalization of less than 1 billion euros and voluntarily adhere to and comply with (i) high transparency and disclosure requirements; (ii) high liquidity (minimum 35% of free float) and (iii) corporate governance best practices.

8 It comprehends the cases where a formal shareholder agreement defines the governance of a listed company and also the situations where, even if no shareholder agreement has been concluded, the company is not widely held nor a single shareholder can exert a dominant influence on the general meetings (GMs).

male directors are more often present and hold a larger number and fraction of board seats.

### 2.3 Female directors characteristics: affiliation and education

The latter evidence suggests to carry out a more in-depth analysis of the characteristics of female directors: here we consider the affiliation with the controlling agent and a simple proxy for their education.

Section A of Table 7 classifies companies according to the nature of women's affiliation with the controlling agent. In the majority of diverse-board companies at least one of the women has a family connection with the controlling shareholder (being the controlling shareholder herself or his wife, daughter or close relative). More precisely, in 47,3% of diverse-board companies female directors are exclusively family members and in a further 9,3% there is at least one family-affiliated woman. Overall, family-affiliated female directors are present in 73 (mainly small) companies representing 10% of total market capitalization.

As for their education, Section B of Table 7 highlights that in the large majority of diverse-board companies at least one of the female directors holds a bachelors' degree (BA), whereas only for 20% of those companies women are not graduated.

Table 8 considers the same characteristics from a director-level perspective. 94 out of 173 female directors (54%) are family-affiliated and in nearly three cases out of four a female director holds (at least) a BA. The proportion of women who are graduated is significantly higher in the non-family group (95% vs. 60%).

These descriptive statistics shed a light on a twofold nature of female representation in Italian boards. On the one hand, there are female directors who are owners (or owners' relatives) and run the company (the larger group). On the other hand, there are professional, on average better educated, directors.

To better understand this duality, Table 9 provides a breakdown of women classified according to their characteristics in terms of affiliation and education and to their role in the board, i.e. whether they are executives, or serve as independent directors or, finally, are neither executive nor independent directors. Only a minority of female directors is independent (nearly 20%). In almost half of the cases, women are non executive directors, while in one case out of three they have an executive role.

As expected the executive roles are generally held by family-affiliated women (68% of cases). With a comparable frequency a non executive female director is family-affiliated (Table 9, section A). As for the education, in all cases but one independent female directors hold (at least) a BA, while the proportion of graduated directors is 74% in the non executive group and 65% among the executives (Table 9, section B).

At a first glance, the state of the art of female representation in Italy appears to differ substantially from the Anglo-Saxon countries, where female are less likely to be executive/inside directors (Carter et al., 2003; Singh et al., 2008). On the contrary, in those countries the large majority of female directors is independent (Adams and Ferreira, 2009).

A previous study on Italian boards – in a historical perspective – provides some evidence on personal characteristics of Italian female directors such as family affiliation (kinship) and education (Gamba and Goldstein, 2008)<sup>9</sup>. The authors find that the percentage of family-affiliated women has decreased in the last four decades while the educational level of female directors has considerably increased in the last ten years.

### 3 Female directorship and corporate characteristics

In this section we investigate whether, and the extent to which, female directorship is associated with certain corporate characteristics. To this end, we examine whether the ownership and control structure, the presence of institutional investors, the sector in which the firm operates and some board characteristics affect female representation<sup>10</sup>. All the variables are described in Table 10, while summary statistics are in Table 11.

In order to conduct our investigation, we also control for some other firm's characteristics. First of all, we control for firm's size, as measured by the logarithm of market capitalization, and some performance measures, namely the return on equity (Roe) and Tobin's Q. As in Adams and Ferreira (2009), Tobin's Q is calculated as the ratio of the firm's market value to its book value, where the firm's market value is the book value of assets minus the book value of equity plus the market value of equity. Moreover, we include as control variables also board size and a measure of the firm age (since going public), in order to counter potential alternative explanation for female representation, such as "inertia"<sup>11</sup>(i.e. traditional boards may tend to maintain the same structure).

In performing our analyses, we formulate a number of hypotheses:

HP1. We expect female representation to be positively correlated to company size, as measured by market capitalization, in that large caps are more subject to market scrutiny and thus have more incentive to conform to social expectations (DiMaggio and Powel, 1985; Meyer and Rowan, 1977). Social expectations for gender diversity could then place pressure on such firms to increase female representation in their

9 The authors analyzed the importance of women representation in the board of directors of Italian listed companies. They carried out an investigation of the common characteristics of women directors in seven benchmark years (1962,1970,1978,1986, 1994, 2002 and 2007) drawing information from various sources.

10 Data on internal governance mechanisms are drawn from 2009 Annual Reports on Corporate Governance; data on ownership and control structure and institutional investors participation are drawn instead from Consob databases.

11 See Hillman et al. (2007).



board. Moreover, as suggested by Adams and Ferreira (2009), larger firms could have more women as directors because they have more diverse workforces, so it may be more important to have diverse leadership<sup>12</sup>.

HP2. We expect a positive correlation between larger boards and female directorship. Firms which do not consider diversity as an advantage, could tend to prefer small and homogeneous boards, while firms with a lower preference for homogeneity could tend to have larger boards (see de Cabo et al., 2009)<sup>13</sup>. Moreover, larger boards may also "accommodate" women more easily, since they have more seats available for potential female candidates<sup>14</sup>. In our sample the average board size is 9,93 and the median value is 9.

HP3. We expect that different ownership and control structures induce a different presence of women on board: a more dispersed ownership might have a greater preference for diversity and, among concentrated ownership, family companies may be more willing to appoint family-affiliated female directors. In order to test this hypothesis, we study how the degree of ownership concentration and the nature of the controlling agent affect gender diversity. We measure ownership concentration through the free float and the control stake. We expect that female directors are more present in companies with a less concentrated ownership, since the more the number of shareholders, the wider the interests to take into account (Hillman et al., 2002; Carter et al., 2003; Kang et al., 2007). The average control stake in our sample is 51,97%, while the median is slightly higher (nearly 54%). The free float has an average of 40,59% and a median of 37%.

As for the nature of the controlling agent, we test whether family-controlled companies (also organized in a coalition), state owned firms, companies coalition, widely held and foreign companies have different preferences towards female directorship. As descriptive statistics have shown, the large majority of our sample is family-controlled (66% of our sample) while only a few (nearly 10%) are owned by a foreign shareholder or are widely held. State owned companies account for the 8% of our sample.

HP4. We hypothesize that industry could play a major role in female representation, affecting the value of benefits from female directorship<sup>15</sup>. Adams and Ferreira (2009) show that female directors are less prevalent in firms with deal with infrastructure, energy or electronics than with consumer products. They explain this results observing that the consumers of the products are more likely to be diverse and hence hav-

12 Many studies report correlations between firm's size and women directorship (Burke, 2000; Singh et al. 2001; Hyland and Marcellino, 2002; Singh and Vinnicombe 2004; Hillman et al 2007; Peterson and Philpot, 2007; Terjesen and Singh, 2008 Adams and Ferreira, 2009). Common measures of firm's size are market capitalization, sales, total assets, number of employees.

13 The finding that the larger the board, the greater the number of female directors is common in the literature (cfr. Hyland and Marcellino, 2002; Brammer et al., 2007; Sealy et al., 2007).

14 Cfr. Agrawal and Knoeber, (2001); Carter et al., 2003.

15 A number of studies find correlations among industry and female representation, even if findings are inconsistent (Fryxell and Lerner, 1989; Hyland and Marcellino, 2002; Brammer et al., 2007; Hillman et al. 2007; Sealy et al. 2007; Joy, 2008).

ing a woman' perspective may be particularly valuable in such firms. Brammer et al. (2007) find the highest rates of female directors on UK boards in the retailing, banking, media and utilities sectors. They interpret these findings considering that these sectors have greater female participation in the workforce, which results in a greater pool of female candidates from which to select potential directors.

HP5. The pressure for gender diversity comes from a number of different stakeholders that firms depend upon. Among them are institutional investors, who increasingly scrutinize corporate boardrooms for diversity (Browder, 1995; Gillan and Starks, 2000; Singh, 2005). Hence, we assume that the presence of institutional investors as major shareholders positively affects female representation (see Gillan and Starks, 2000). We look at ownership by institutional investors, both Italian and foreign and in particular at whether they are major shareholders, i.e. hold more than 2% of the capital of Italian listed companies<sup>16</sup>. In our sample, institutional investors are present above such threshold in 50% of our firms. This is mostly true for foreign investors, which are present in 44% of the sample.

HP6. Finally, we investigate whether women directorship is affected by some board characteristics, such as the average age of the board, the percentage of independent directors and the percentage of directors appointed by minorities. The latter two measures can be a proxy for the firm vocation towards diversity and hence they could be positively correlated to female representation. With reference to the average age of the board, our hypothesis is that older board are more resistant to women directors (Carter et al., 2002). The average age of the directors in our sample is 56,1 and the median is almost the same (56,4). The oldest board has an average age of 69, the youngest of 40. Directors appointed by minorities are not very represented, since the average percentage of such directors in the boards is 0,055 and the median is 0<sup>17</sup>. Finally, the average percentage of independent directors in the board is 0,345 and the median is 0,33.

### 3.1 Data and Methodology

In order to take all these factors into account, we perform some probit regressions where the dependent variable is whether at least one women is in the board. Our sample include all the 262 Italian companies listed on the Italian Stock Exchange at the end of 2009 for which all data are available. For these firms data on board of director characteristics (gender and age) are obtained from the Consob database, while other data on board composition and attendance are drawn from companies' Corporate Governance Annual Reports for the year 2009.

We do not only investigate which variable are correlated to female directorship as a whole, but we also try to understand if they differ according to the "type" of

16 In Italy shareholders are required to disclose holdings of more than 2% in Italian listed companies.

17 This is also because the legal mandate for at least one minority director is fairly recent, and thus implementation is still a work in progress. This is not the case for privatized firms which have longer been subject to similar provisions (which envisage the so-called "voto di lista").

woman appointed. In particular, we want to learn whether the predictors of family-affiliated female directorship differ from those of not-affiliated.

Hence, we estimate three different model. In the first (section 3.2) the dependent variable is a dummy measuring the presence of at least a woman in the board, while in the other two models we consider separately the presence of family-affiliated and non-family female directors (section 3.3)<sup>18</sup>.

### 3.2 Female directorship

Tables 12-14 show the results of the probit regressions where the dependent variable is the dummy *female*.

As for the control variables, all the regressions show that the probability of having at least one female director decreases with firm size. This finding, in line with our descriptive statistics, is against our assumptions and the main results in the literature. Board size is always positive and statistically significant, suggesting, as expected, that firms with higher boards are more open to diversity<sup>19</sup>. The variable *listing year* is always significant and negative, indicating that women directors are more likely in older firms, as shown also by Hillman et al. (2007). Finally, no correlation between performance and women's presence seems to exist since the coefficients for *ROE* and *Tobin's Q* are never significant.

In Table 12, columns (2)-(7) we regress our dependent variable against some measures of firms' ownership and control structure. Results indicate that the probability of having female directors is higher in widely held companies or in firms owned by a foreign shareholder. However, looking at the variables measuring the degree of ownership concentration, it seems that females are more represented in companies with a concentrated ownership (*control stake* is positive and sometimes significant; *free float* is negative and never significant), countering our assumptions and, partially, the previous finding.

In Table 13 we extend our analysis by regressing the dependent variable against variables related to the sector in which the firm operates. Results suggest that firms in the *it/tlc* sector have a higher probability to appoint women as directors as compared to other sectors. The positive relationship between female directorship and *it/tlc* can be probably explained considering that firms in this industry are younger (the average listing year is 2000, the highest among all sectors), smaller (they represent only 4% of the entire market) and more dynamic than others companies, considering the peculiarities of the sector in which they operate. Another possible explanation for the result is that in the *it/tlc* sector greater monitoring ability is needed, since the complexity of the matters increases the level of information asym-

18 We have also performed some tobit regressions, in order to measure the impact of our regressors on the percentage of female directors in the board (all females, affiliated females and not-affiliated women). The related results are not provided here, since they are completely in line with the probit findings.

19 This result is in line with Carter et al. 2002, Hillman et al., 2007, de Cabo et al. 2009.

metry between managers and directors. Hence, women could be selected in order to increase the board monitoring ability.

Finally, in Table 14 we consider the effect on our dependent variable of both institutional investors presence and board characteristics. As shown by columns (1) to (3), female directorship is also positively related to the presence of institutional investors. The result is mainly driven by foreign institutional investors, since the coefficient for *mh\_iiit* is positive but not significant, whereas that for *mh\_iiie* is positive and significant at the 5% level. Finally, results do not support our hypotheses on the effects of board characteristics, since none of the variables considered is statistically significant.

### 3.3 Family and non-family affiliation

In Tables 15-17 we show the results of the probit regressions using as dependent variables *f\_female* (Model 1) and *nf\_female* (Model 2) separately. Comparing the results of the two Models, some interesting findings emerge.

*Control variables.* As for the control variables, we observe that the results for *lcap* and *board size* are confirmed, even if the variable *lcap* is not always related to the presence of not family-affiliated women. Also the year when the firm went public loses significance, especially with regard to *f\_female*, while it is sometimes significant and negative when non-family directorship is considered. *Roe* and *Tobin's Q* are, as before, never significant.

*Ownership and control.* In Table 15, columns (2)-(3) the dependent variables are regressed against ownership concentration measures. A first difference emerges between the two Models. While the probability of having a non-family woman is not related to these variables, the presence of family female directors is higher in companies where ownership is more concentrated, as shown by the variables *control stake* and *free float* (the related coefficients are both significant at the 1% level, the first positive and the second negative). Considering the type of owner (Table 16), we observe other differences. The probability of having a non-family female is higher in widely held, foreign and state owned companies and lower with family control (both organized in coalition or single). With reference to family-affiliated directors, in principle, they could sit on the boards of family firms (controlled by a coalition or by a single agent), in companies coalition and in companies owned by a foreign shareholder<sup>20</sup>. Results show that what matters in explaining the presence of a family-affiliated female director is the variable *family*, whose coefficient is positive and significant at the 1% level. Overall, the results suggest that ownership and control structure matters in explaining not only the presence of a female director, but also the kind of woman director.

*Sector.* In Table 17 we provide evidence on the relation between the company sector and female directorship. Results show that family and non-family female directors

20 Differently, in widely held firms and in state owned companies it is not possible to find a family-affiliated female.

are more frequent in different sectors. Family-affiliated females are more present in firms active in the consumer products sector (in line with Adams and Ferreira, 2009) and less in public utilities. The coefficient for *it/tlc* is not significant, as well as the coefficients for *financial* and *industrial*. Differently, the directorship of non-family women is higher in the *it/tlc* sector and lower in the consumer industry. All the other sector-variables do not matter.

*Institutional investors.* In Table 18 we extend our analysis by regressing against variables related to institutional investors presence. As for *f\_female*, data suggest that institutional investors with major shareholdings favour female representation only as a whole, since the effect of either foreign and Italian institutional investors is not significant. This result is in line with the discussion in section 3.2. Regarding the dummy *nf\_family*, results differ according to the type of controlling agent we control for: controlling for *wh/foreign*, institutional investors major shareholdings do not play any role. Instead, controlling for *family* or *soe*, the presence of institutional investors as a whole increases the probability of having a non-family female director. The result is stronger in the case of family companies, where also the presence of foreign institutional investors seems to play a role<sup>21</sup>. These results can be explained considering that in firms with a lower propensity to a "real diversity", such as family firms and, to a less extent, state owned companies, the role played by outside shareholders is more important than in companies which, in principle, could be more open to diversity, such as widely held and foreign companies.

*Board characteristics.* Finally, in Table 19 we include also variables measuring some board characteristics. None of these variables is related to the dummy *f\_female*. Instead, the probability of having a not-affiliated woman increases when the average age of the board falls and is higher in firms with a higher percentage of independent directors. The percentage of minorities directors is never significant. These findings could indicate that diversity is not an issue in those firms where family-affiliated women are appointed, since board diversity, as measured by the percentage of independent directors and the average age of the board, is not a predictor of female directorship. Differently, in firms where women directors are chosen for other reasons than their links with the main shareholder, diversity could be a value.

Overall, our results provide evidence of a twofold nature of female representation in the Italian market. Two very different models emerge. On the one hand, family-affiliated women are more present in smaller companies, with a concentrated ownership and which operate in the consumer products sector. On the other hand, not-affiliated women are more common in widely held companies or in firms owned by a foreign shareholder, in the IT/telecommunication sectors, and in companies with younger and more independent boards. In both models the presence of institutional investors and the size of the board seem to be associated with greater female representation.

21 This is not the case when we regress against *soe*.

## 4 Female directorship and measures of performance and governance

What we found in the previous section is useful in driving the analysis on the correlation between gender diversity and performance. We might expect the role and effects in the two cases (family and non-family affiliation) to be different and that the monitoring role that the literature finds in diversity matters only in the second.

In this section we examine the relationship between gender diversity and some measures of: a) performance and b) good corporate governance.

We proxy performance with the Tobin's Q, as the main literature does, but also consider stock volatility (i.e. the volatility of daily stock returns over a company fiscal year) as a measure of the riskiness of the company.

With reference to good governance, we consider some measures of board behavior usually associated with good corporate governance, the number of board meetings and the average director attendance at board meetings. The number of board meetings is considered a measure of good governance since they are a relevant source of information and hence they should increase directors effectiveness and facilitate their monitoring role<sup>22</sup>. For the same reason, also the attendance behavior of directors is considered a proxy of good corporate governance. Finally we also consider the relationship between gender diversity and a corporate governance index, the "CoRe" indicator by Bianchi et al. (2011) which measures the quality of companies' procedures voluntarily adopted for the handling of related party transactions (RPTs)<sup>23</sup>: the way in which RPT are dealt with is considered one of the best indicator of minority investor protection<sup>24</sup>.

As a preliminary test we only consider differences between mean values. Table 20 shows the results of our investigation. Firstly, differences in performance measures are never statistically significant, neither comparing companies with an all-male board and those with a diverse board, nor considering firms where boards are composed by family-affiliated women and those with boards composed by non-family females.

Some results emerge looking at governance outcomes. Contrary to other literature results, firms with at least one female have lower board attendance and a lower number of board meetings than firms without women: the differences in the averages are statistically significant. This results seems mainly driven by family female directors cases. Indeed, comparing companies with diverse boards, it appears that the average number of board meetings is higher in companies whose boards are composed only by non-family female directors (10.81 *versus* 7.98), but still lower

22 Cfr. Adams and Ferreira, (2009).

23 More specifically, the indicator measures the degree of compliance with the best practices regarding RPTs recommended by the Italian Corporate Governance Code (Codice di Autodisciplina).

24 See Djankov et al., (2008).

than only male boards. However the result might be driven by either larger companies (where attendance is generally higher) or other companies' characteristics we are not controlling for here.

The *CoRe* indicator is higher in firms with diverse boards and, in particular, with boards composed by not-affiliated female directors. However, differences between the average values are never statistically significant.

Clearly, this analysis is not sufficient to assess the effects of gender diversity on corporate governance and performances. However, findings cast some doubts on the possibility that the results of many studies proving a positive effect of gender diversity on corporate governance and performance could apply in the Italian case. Further work is needed in order to investigate the issue of the effects of gender diversity in the Italian context.

## 5 Conclusion

In the paper we have offered a preliminary analysis of women on Italian listed companies' boards. Our objective was to understand who are currently the women directors and what drives their presence on the various companies' boards, which might offer some elements to understand how have they been selected.

The female presence still concerns the minority of companies (mainly the smaller ones). When women are present, in most cases they are alone. Even a simplified descriptive (regression) analysis shows some interesting regularities: their presence is associated to different characteristics of boards and of women themselves, depending in particular on whether they are related (through family links) to the controlling agent.

This might provide some insight and indications regarding the future process of recruitment of women associated with the imposition of gender quotas in Italy. Further insights might come from a deeper analysis of the effects on performance and governance, which is still somehow limited by the extremely small share of board seats held by women.





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Table 1 Gender quotas regulation across European countries

Country	Corporate Governance Code		Legislation	
Norway			All public limited firms are required to have at least 40% female directors	2003 (effective since 2006)
Finland	Under the comply or explain principle, it is recommended that both genders are represented in public companies boards.	2010	A 40% gender quota is required for wholly state-owned companies.	2004 (effective since 2006)
Sweden	Listed companies should strive for equal gender distribution on the board.	2008	The issue of gender quotas is being debated.	
Spain	Companies with no or few female directors should explain the reasons and the solutions taken (the Nomination Committee should take steps to ensure that no gender bias affects directors' appointment).	2006	The law requires a 40% gender quota in board of directors.	2007 (effective from 2015)
France			The law requires a 40% gender quota for large listed companies.	2011 (effective from 2017)
United Kingdom	The UK Corporate Governance Code states that the search for board candidates should be conducted, and appointments made, with due regard for the benefits of diversity on the board, including gender.	2010		
Italy			The law requires one third of board sits to be held by female directors.	2011 (effective from 2015)
Germany	Respect for diversity and appropriate consideration of women shall be taken into account in the appointment of the management board and in the filling of managerial positions in the enterprise.	2010	The issue of gender quotas is being debated.	
Netherlands	The Dutch code suggests that the supervisory board shall prepare a profile of its size and composition, which considers diversity and state the specific objective pursued in relation to it.	2008	Gender quotas legislation has been proposed in Parliament.	
Belgium	According to the Belgian Code, gender diversity should be taken into account in companies' key policies and in board composition.	2009	Gender quotas legislation has been proposed in Parliament.	

**Table 2 Female representation in corporate boards for Italian listed companies in 2004–2009**

	2004		2005		2006		2007		2008		2009	
	#	%	#	%	#	%	#	%	#	%	#	%
Female directors	122	4,5	130	4,6	133	4,7	155	5,4	158	5,4	173	6,3
Companies with at least a female director	91	33,8	97	35,3	103	36,4	118	39,9	120	41,0	129	46,4

**Table 3 Distribution of Italian listed companies by number of female directors (end of 2009)**

	N. of female directors	N. of companies	% Market Capitalization
Companies with female directors	5	1	0,3
	4	2	0,3
	3	3	0,2
	2	28	13,1
	1	95	19,6
All-male board	0	149	66,5

**Table 4 Female directors representation in Italian listed companies by Market Index (end of 2009)**

Market Index	N. of companies	% of companies with at least a female director	Average N. of female directors	Average % of female directors	Average board size
FTSE MIB	38	31,6	0,50	3,1	13,55
FTSE MID CAP	43	48,8	0,70	5,4	12,40
STAR	70	50,0	0,60	6,7	9,36
Other	127	48,0	0,65	8,2	8,32
<i>Total</i>	<i>278</i>	<i>46,4</i>	<i>0,62</i>	<i>6,7</i>	<i>9,93</i>

**Table 5 Female directors representation in Italian listed companies by industry (end of 2009)**

Industry	N. of companies	% of companies with at least a female director	Average N. of female directors	Average % of female directors	Average board size
Consumer	85	47,1	0,65	7,4	8,86
Financial	59	45,8	0,69	6,2	12,49
Industrial	79	46,8	0,59	6,5	9,87
IT & Telecommunication	27	55,6	0,74	9,3	8,07
Public utilities	28	35,7	0,36	3,6	9,71
<i>Total</i>	<i>278</i>	<i>46,4</i>	<i>0,62</i>	<i>6,7</i>	<i>9,93</i>

**Table 6 Female directors representation in Italian listed companies by control model and controlling agent (end of 2009)**

	N. of companies	% of companies with at least a female director	Average N. of female directors	Average % of female directors	Average board size
<b>A) Control Model</b>					
Single	184	49,5	0,68	7,6	9,53
Formal coalition	58	43,1	0,55	5,4	10,72
Informal coalition	19	36,8	0,42	4,7	8,84
Widely held	9	44,4	0,56	4,7	10,33
Cooperatives	8	25,0	0,25	1,4	15,38
Total	278	46,4	0,62	6,7	9,93
<b>B) Controlling Agent</b>					
Family	184	47,3	0,66	7,2	9,33
Other/Non-family	94	44,7	0,54	5,8	11,10
Total	278	46,4	0,62	6,7	9,93

**Table 7 Distribution of companies by affiliation and education of female directors (end of 2009)**

Characteristics of female directors		N. of companies	% of companies with at least a female director	% of total number of companies	% of total market capitalization
A) Affiliation	Family	61	47,3	21,9	7,1
	Non-family	56	43,4	20,1	23,8
	Both	12	9,3	4,3	2,7
	All-male board	149	-	53,6	66,5
B) Education	At least one BA	102	79,1	36,7	32,0
	Not graduated	27	20,9	9,7	1,55
	All-male board	149	-	53,6	66,5

**Table 8 Female directors by affiliation and education**

	Family affiliated		Non-family affiliated		Total female directors	
	#	%	#	%	#	%
Bachelor's Degree	56	60	75	95	131	76
Not graduated	38	40	4	5	42	24
Total female directors	94	100	79	100	173	100

**Table 9 Female directors by affiliation, education and role (end of 2009)**

	Executive		Non executive		Independent		Total	
	#	%	#	%	#	%	#	%
A) Affiliation								
Family	39	68,4	55	67,9	0	0,0	94	54,3
Non-family	18	31,6	26	32,1	35	100,0	79	45,7
B) Education								
Bachelor's Degree	37	64,9	60	74,1	34	97,1	131	75,7
Not graduated	20	35,1	21	25,9	1	2,9	42	24,3
Total female directors	57	32,9	81	46,8	35	20,2	173	100,0



**Table 10 Description of the variables**

Name	Description
<i>Female</i>	Dummy variable assuming value equal to one if at least a female director holds a board sit
<i>f_female</i>	Dummy variable assuming value equal to one if at least a family affiliated female director holds a board sit
<i>nf_female</i>	Dummy variable assuming value equal to one if at least a non-family affiliated female director holds a board sit
<i>Lcap</i>	Natural logarithm of firms' market capitalization at the end 2009
<i>ROE</i>	Return on equity in the 2009 financial year
<i>Tobin's Q</i>	Ratio between the market value of the firm and its book value
<i>Board size</i>	Number of directors
<i>Listing year</i>	Year of listing
<i>Control Stake</i>	Stake held by the controlling shareholder or coalition or by the shareholder with the highest stake
<i>Free float</i>	Stake held by dispersed shareholders or by institutional investors
<i>Family</i>	Dummy variable assuming value equal to one if a company is controlled by a family
<i>C. Coalition</i>	Dummy variable assuming value equal to one if a company is controlled by a coalition of companies
<i>F. Coalition</i>	Dummy variable assuming value equal to one if a company is controlled by a family coalition
<i>Foreign</i>	Dummy variable assuming value equal to one if a company is controlled by a foreign controlling agent
<i>Wh/Foreign</i>	Dummy variable assuming value equal to one if a company is either widely held or controlled by a foreign controlling agent
<i>Soe</i>	Dummy variable assuming value equal to one if a company is state-owned
<i>It/Tlc</i>	Dummy variable assuming value equal to one if a company is in the It/Telecommunication sector
<i>Consumers</i>	Dummy variable assuming value equal to one if a company is in the consumers' sector
<i>Financial</i>	Dummy variable assuming value equal to one if a company is in the financial sector (i.e. banks, insurance companies or other financial institutions)
<i>Industrial</i>	Dummy variable assuming value equal to one if a company is in the industrial sector
<i>P.Utilities</i>	Dummy variable assuming value equal to one if a company is a public utility
<i>Mh_ii</i>	Dummy variable assuming value equal to one if at least one institutional investor is a major shareholder
<i>Mh_iee</i>	Dummy variable assuming value equal to one if at least one foreign institutional investor is a major shareholder
<i>Mh_iiit</i>	Dummy variable assuming value equal to one if at least one Italian institutional investor is a major shareholder
<i>Age Board</i>	Average age of directors
<i>% min_dir</i>	Percentage of minority directors in the board
<i>% ind_dir</i>	Percentage of independent directors in the board

**Table 11 Description of the sample**

Name	N. Obs	Mean	Min	Max	Median
<i>Female</i>	278	0,464	0	1	0
<i>Family female</i>	278	0,26	0	1	0
<i>Non-family female</i>	278	0,24	0	1	0
<i>Lcap</i>	278	19,11	15,03	24,99	18,81
<i>ROE</i>	263	-14,2%	-974,7%	164,5%	2,19%
<i>Tobin's Q</i>	278	1170,1	435,9	5409,3	1029,8
<i>Board size</i>	278	9,93	2	25	9
<i>Listing year</i>	278	1997	1978	2009	2000
<i>Control Stake</i>	278	51,97%	0%	95,01%	53,99%
<i>Free float</i>	278	40,59%	1,03%	100%	37,02%
<i>Family</i>	278	0,662	0	1	1
<i>C. Coalition</i>	278	0,093	0	1	0
<i>F. Coalition</i>	278	0,118	0	1	0
<i>Foreign</i>	278	0,064	0	1	0
<i>Wh/Foreign</i>	278	0,097	0	1	0
<i>Soe</i>	278	0,079	0	1	0
<i>Mh_ii</i>	278	0,507	0	1	1
<i>Mh_iiie</i>	278	0,442	0	1	0
<i>Mh_iiit</i>	278	0,126	0	1	0
<i>Age Board</i>	278	56,1	40	69,6	56,4
<i>% min_dir</i>	278	0,055	0	0,75	0
<i>% ind_dir</i>	278	0,345	0	0,9	0,33

**Table 12 Probit regressions**

(The dependent variable is a dummy variable assuming value equal to one if at least one female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership and control structure variables. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Lcap	-0.0754*** (0.000)	-0.0697*** (0.001)	-0.0682*** (0.002)	-0.0713*** (0.002)	-0.0705*** (0.001)	-0.0718*** (0.002)	-0.0766*** (0.001)
ROE	0.0005 (0.167)	0.0004 (0.267)	0.0004 (0.261)	0.0004 (0.265)	0.0004 (0.269)	0.0004 (0.270)	0.0005 (0.225)
Tobin's Q	-0.0000 (0.635)	-0.0000 (0.633)	-0.0000 (0.609)	-0.0000 (0.628)	-0.0000 (0.666)	-0.0000 (0.640)	-0.0000 (0.526)
Board Size	0.0356*** (0.001)	0.0379*** (0.001)	0.0371*** (0.001)	0.0377*** (0.001)	0.0394*** (0.001)	0.0385*** (0.001)	0.0409*** (0.000)
Listing year	-0.0563* (0.060)	-0.0512* (0.090)	-0.0524* (0.082)	-0.0522* (0.087)	-0.0504* (0.096)	-0.0514* (0.088)	-0.0538* (0.077)
Control Stake		0.0030 (0.106)		0.0031 (0.100)	0.0031* (0.098)	0.0030 (0.106)	0.0036** (0.044)
Free float			-0.0025 (0.166)				
Family				-0.0209 (0.782)			
C. Coalition					-0.0644 (0.557)		
Soe						0.0428 (0.731)	
Wh/Foreign							0.2451** (0.045)
Obs	262	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.0587	0.0663	0.0638	0.0665	0.0672	0.0666	0.0783

**Table 13 Probit regressions**

(The dependent variable is a dummy variable assuming value equal to one if at least one female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership and control structure variables, sector. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	(1)	(2)	(3)	(4)	(5)
Lcap	-0.0719*** (0.002)	-0.0763*** (0.001)	-0.0764*** (0.001)	-0.0781*** (0.001)	-0.0720*** (0.002)
ROE	0.0005 (0.152)	0.0005 (0.222)	0.0005 (0.236)	0.0005 (0.205)	0.0005 (0.232)
Tobin's Q	-0.0000 (0.550)	-0.0000 (0.491)	-0.0000 (0.470)	-0.0000 (0.554)	-0.0000 (0.487)
Board Size	0.0425*** (0.000)	0.0421*** (0.000)	0.0443*** (0.000)	0.0411*** (0.000)	0.0399*** (0.001)
Listing Year	-0.0597* (0.052)	-0.0541* (0.075)	-0.0564* (0.066)	-0.0554* (0.070)	-0.0515* (0.093)
Control Stake	0.0045** (0.018)	0.0035* (0.052)	0.0034* (0.059)	0.0037** (0.039)	0.0038** (0.036)
Wh/Foreign	0.2352* (0.054)	0.2487** (0.042)	0.2527** (0.039)	0.2464** (0.044)	0.2366* (0.056)
It/Tlc	0.2221* (0.053)				
Consumers		0.0602 (0.395)			
Financial			-0.0931 (0.270)		
Industrial				-0.0463 (0.515)	
P. Utilities					-0.0826 (0.471)
Obs	262	262	262	262	262
Pseudo R <sup>2</sup>	0.0887	0.0803	0.0816	0.0795	0.0798

**Table 14 Probit regressions**

(The dependent variable is a dummy variable assuming value equal to one if at least one female director is in the company's board. All regressors. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	(1)	(2)	(3)	(4)	(5)	(6)
Lcap	-0.0864*** (0.000)	-0.0886*** (0.000)	-0.0671*** (0.003)	-0.0794*** (0.001)	-0.0831*** (0.000)	-0.0885*** (0.000)
ROE	0.0004 (0.269)	0.0005 (0.196)	0.0004 (0.190)	0.0004 (0.283)	0.0003 (0.326)	0.0004 (0.274)
Tobin's Q	-0.0000 (0.430)	-0.0000 (0.386)	-0.0000 (0.631)	-0.0000 (0.334)	-0.0000 (0.397)	-0.0000 (0.443)
Board Size	0.0441*** (0.000)	0.0438*** (0.000)	0.0422*** (0.000)	0.0455*** (0.000)	0.0436*** (0.000)	0.0400*** (0.000)
Listing year	-0.0800** (0.012)	-0.0705** (0.025)	-0.0666** (0.032)	-0.0904*** (0.006)	-0.0789** (0.013)	-0.0811** (0.011)
Control Stake	0.0053*** (0.006)	0.0052*** (0.007)	0.0045** (0.019)	0.0052*** (0.007)	0.0053*** (0.006)	0.0054*** (0.006)
Wh/Foreign	0.2334* (0.056)	0.2408** (0.051)	0.2245* (0.069)	0.2179* (0.077)	0.2256* (0.066)	0.2366* (0.051)
It/Tlc	0.2515** (0.038)	0.2419** (0.037)	0.2298** (0.049)	0.2408** (0.047)	0.2559** (0.032)	0.2480** (0.042)
Mh_ii	0.2287*** (0.001)			0.2289*** (0.001)	0.2277*** (0.001)	0.2303*** (0.001)
Mh_iiee		0.1765** (0.013)				
Mh_iiit			0.1315 (0.195)			
Age Board				-0.0094 (0.187)		
% min_dir					-0.1840 (0.568)	
% ind_dir						0.0905 (0.621)
Obs	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.1201	0.1060	0.0935	0.1249	0.1210	0.1207

**Table 15 Probit regressions**

(Model 1: The dependent variable is a dummy variable assuming value equal to one if at least one family-affiliated female director is in the company's board. Model 2: The dependent variable is a dummy variable assuming value equal to one if at least one not family-affiliated female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership concentration variables. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	Model1 <i>f_female</i>			Model2 <i>nf_female</i>		
	(1)	(2)	(3)	(1)	(2)	(3)
Lcap	-0.0678*** (0.000)	-0.0622*** (0.001)	-0.0584*** (0.003)	-0.0264 (0.129)	-0.0285 (0.109)	-0.0312* (0.084)
ROE	0.0003 (0.255)	0.0003 (0.403)	0.0002 (0.448)	0.0003 (0.461)	0.0003 (0.409)	0.0003 (0.363)
Tobin's Q	0.0000 (0.642)	0.0000 (0.629)	0.0000 (0.704)	0.0000 (0.790)	0.0000 (0.791)	0.0000 (0.769)
Board Size	0.0215** (0.014)	0.0241*** (0.006)	0.0238*** (0.008)	0.0228** (0.011)	0.0222** (0.014)	0.0219** (0.014)
Listing year	-0.0308 (0.230)	-0.0250 (0.332)	-0.0249 (0.328)	-0.0371 (0.148)	-0.0389 (0.131)	-0.0398 (0.124)
Control Stake		0.0042*** (0.003)			-0.0008 (0.567)	
Free float			-0.0040*** (0.006)			0.0014 (0.331)
Obs	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.0396	0.0601	0.0575	0.0405	0.0417	0.0437

**Table 16 Probit regressions**

(Model 1: The dependent variable is a dummy variable assuming value equal to one if at least one family-affiliated female director is in the company's board. Model 2: The dependent variable is a dummy variable assuming value equal to one if at least one not family-affiliated female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership and control structure variables. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	Model1 <i>f_female</i>					Model2 <i>nf_female</i>				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Lcap	-0.0455** (0.024)	-0.0635*** (0.001)	-0.0608*** (0.002)	-0.0599*** (0.001)	-0.0611*** (0.001)	-0.0419** (0.023)	-0.0267 (0.122)	-0.0305* (0.078)	-0.0339* (0.060)	-0.0386** (0.038)
ROE	0.0002 (0.383)	0.0003 (0.401)	0.0003 (0.373)	0.0002 (0.410)	0.0002 (0.409)	0.0003 (0.393)	0.0003 (0.461)	0.0002 (0.458)	0.0004 (0.353)	0.0002 (0.495)
Tobin's Q	0.0000 (0.571)	0.0000 (0.581)	0.0000 (0.611)	0.0000 (0.603)	0.0000 (0.612)	8.11e-06 (0.868)	0.0000 (0.779)	9.74e-06 (0.844)	4.16e-06 (0.938)	0.0000 (0.755)
Board Size	0.0280*** (0.003)	0.0263*** (0.004)	0.0235*** (0.007)	0.0232*** (0.008)	0.0236*** (0.007)	0.0204** (0.023)	0.0231** (0.011)	0.0244*** (0.006)	0.0252*** (0.005)	0.0263*** (0.005)
Listing Year	-0.0120 (0.632)	-0.0241 (0.349)	-0.0265 (0.304)	-0.0243 (0.343)	-0.0247 (0.337)	-0.0501** (0.048)	-0.0369 (0.151)	-0.0327 (0.192)	-0.0404 (0.120)	-0.0404 (0.108)
Control Stake	0.0036** (0.019)	0.0043*** (0.003)	0.0042*** (0.004)	0.0042*** (0.005)	0.0043*** (0.003)					
Family	0.2367*** (0.000)					-0.1886*** (0.004)				
C. Coalition		-0.0821 (0.361)					-0.0136 (0.886)			
F. Coalition			0.0751 (0.380)					-0.2081*** (0.005)		
Wh/Foreign				-0.0718 (0.510)					0.2627** (0.012)	
Foreign					-0.0501 (0.673)					
Soe										0.2607** (0.022)
Obs	262	262	262	262	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.1127	0.0628	0.0627	0.0616	0.0608	0.0719	0.0406	0.0700	0.0601	0.0598

**Table 17 Probit regressions**

(Model 1: The dependent variable is a dummy variable assuming value equal to one if at least one family-affiliated female director is in the company's board. Model 2: The dependent variable is a dummy variable assuming value equal to one if at least one not family-affiliated female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership and control structure variables, sector. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	Model1 <i>f_female</i>					Model2 <i>nf_female</i>				
	(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)
Lcap	-0.0434** (0.031)	-0.0477** (0.019)	-0.0455** (0.022)	-0.0468** (0.020)	-0.0394* (0.054)	-0.0307* (0.085)	-0.0346* (0.048)	-0.0339* (0.060)	-0.0348* (0.054)	-0.0420** (0.020)
ROE	0.0002 (0.352)	0.0003 (0.323)	0.0002 (0.412)	0.0003 (0.307)	0.0002 (0.408)	0.0004 (0.247)	0.0003 (0.326)	0.0004 (0.351)	0.0004 (0.341)	0.0004 (0.346)
Tobin's Q	0.0000 (0.584)	0.0000 (0.660)	0.0000 (0.632)	0.0000 (0.510)	0.0000 (0.743)	0.0000 (0.850)	0.0000 (0.842)	4.56e-06 (0.933)	6.21e-06 (0.910)	0.0000 (0.841)
Board Size	0.0285*** (0.003)	0.0310*** (0.001)	0.0297*** (0.002)	0.0281*** (0.003)	0.0264*** (0.005)	0.0259*** (0.004)	0.0232*** (0.009)	0.0247*** (0.008)	0.0250*** (0.005)	0.0273*** (0.003)
Listing Year	-0.0146 (0.566)	-0.0149 (0.544)	-0.0140 (0.578)	-0.0145 (0.561)	-0.0051 (0.833)	-0.0477* (0.073)	-0.0418 (0.108)	-0.0400 (0.122)	-0.0415 (0.113)	-0.0452* (0.084)
Control Stake	0.0040** (0.012)	0.0032** (0.033)	0.0035** (0.026)	0.0037** (0.015)	0.0041*** (0.007)					
Family	0.2392*** (0.000)	0.2206*** (0.001)	0.2323*** (0.000)	0.2415*** (0.000)	0.2163*** (0.001)					
Wh/Foreign						0.2366** (0.018)	0.2524** (0.015)	0.2610** (0.013)	0.2625** (0.012)	0.2917*** (0.007)
It/Tlc	0.1159 (0.274)					0.2019** (0.042)				
Consumers		0.1604** (0.010)					-0.1095* (0.062)			
Financial			-0.0612 (0.378)					0.0122 (0.860)		
Industrial				-0.0736 (0.213)					-0.0321 (0.590)	
P.Utilities					-0.2187** (0.027)					0.1578 (0.109)
Obs	262	262	262	262	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.1165	0.1353	0.1151	0.1181	0.1360	0.0731	0.0726	0.0602	0.0612	0.0686



**Table 18 Probit regressions**

(Model 1: The dependent variable is a dummy variable assuming value equal to one if at least one family-affiliated female director is in the company's board. Model 2: The dependent variable is the dummy variable assuming value equal to one if at least one not family-affiliated female director is in the company's board. Regressors: size, performance measures, board size, listing year, ownership and control structure variables, sector, institutional investors. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	Model 1 <i>f_female</i>			Model 2 <i>nf_female</i>					
	(1)	(2)	(3)	(1)	(2)	(3)	(4)	(5)	(6)
Lcap	-0.0566*** (0.005)	-0.0543*** (0.009)	-0.0453** (0.027)	-0.0363** (0.045)	-0.0377** (0.044)	-0.0288 (0.111)	-0.0494** (0.010)	-0.0450** (0.017)	-0.0503** (0.012)
ROE	0.0003 (0.414)	0.0003 (0.344)	0.0003 (0.362)	0.0004 (0.275)	0.0004 (0.249)	0.0004 (0.269)	0.0003 (0.313)	0.0003 (0.362)	0.0004 (0.275)
Tobin's Q	0.0000 (0.683)	0.0000 (0.720)	0.0000 (0.614)	5.28e-06 (0.920)	3.12e-06 (0.953)	0.0000 (0.805)	5.92e-06 (0.901)	0.0000 (0.738)	3.32e-06 (0.945)
Board Size	0.0307*** (0.001)	0.0310*** (0.001)	0.0308*** (0.002)	0.0259*** (0.004)	0.0260*** (0.004)	0.0257*** (0.005)	0.0212** (0.015)	0.0280*** (0.002)	0.0214** (0.015)
Listing Year	-0.0280 (0.246)	-0.0193 (0.434)	-0.0195 (0.429)	-0.0552** (0.040)	-0.0523* (0.051)	-0.0503* (0.063)	-0.0703*** (0.008)	-0.0596** (0.022)	-0.0653** (0.014)
Control Stake	0.0037** (0.017)	0.0035** (0.026)	0.0033** (0.030)						
Family	0.2016*** (0.002)	0.2106*** (0.001)	0.2180*** (0.001)				-0.2073*** (0.002)		-0.1985*** (0.003)
Wh/Foreign				0.2330** (0.019)	0.2381** (0.018)	0.2303** (0.022)			
It/Tlc				0.2119** (0.035)	0.2080** (0.038)	0.2064** (0.039)	0.2157** (0.035)	0.2555** (0.015)	0.2111** (0.039)
Soe								0.3002*** (0.008)	
Consumers	0.1576** (0.011)	0.1615*** (0.009)	0.1587** (0.010)						
Mh_ii	0.1183** (0.034)			0.0863 (0.121)			0.1237** (0.030)	0.1055* (0.057)	
Mh_iee		0.0612 (0.304)			0.0721 (0.213)				0.1026* (0.087)
Mh_iiit			0.0699 (0.407)			0.0560 (0.507)			
Obs	262	262	262	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.1495	0.1389	0.1376	0.0814	0.0785	0.0746	0.1022	0.0906	0.0960

**Table 19 Probit regressions**

(Model 1: The dependent variable is a dummy variable assuming value equal to one if at least one family-affiliated female director is in the company's board. Model 2: The dependent variable is a dummy variable assuming value equal to one if at least one not family-affiliated female director is in the company's board. All regressors. In parentheses p-values are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively. Marginal effects are reported)

	Model 1 <i>f_female</i>			Model 2 <i>nf_female</i>				
	(1)	(2)	(3)	(1)	(2)	(3)	(4)	(5)
Lcap	-0.0550*** (0.007)	-0.0553*** (0.007)	-0.0522** (0.010)	-0.0273 (0.133)	-0.0283 (0.129)	-0.0340* (0.070)	-0.0400* (0.051)	-0.0328* (0.092)
ROE	0.0003 (0.423)	0.0002 (0.482)	0.0003 (0.421)	0.0004 (0.244)	0.0004 (0.247)	0.0003 (0.326)	0.0002 (0.480)	0.0001 (0.587)
Tobin's Q	0.0000 (0.711)	0.0000 (0.724)	0.0000 (0.705)	-9.08e-06 (0.872)	-8.35e-06 (0.883)	-3.12e-06 (0.956)	-0.0000 (0.836)	-4.38e-06 (0.937)
Board Size	0.0309*** (0.002)	0.0304*** (0.002)	0.0311*** (0.001)	0.0272*** (0.002)	0.0273*** (0.002)	0.0271*** (0.003)	0.0213** (0.018)	0.0294*** (0.001)
Listing Year	-0.0303 (0.227)	-0.0273 (0.259)	-0.0266 (0.272)	-0.0676** (0.016)	-0.0682** (0.014)	-0.0745*** (0.007)	-0.0864*** (0.002)	-0.0744*** (0.005)
Control Stake	0.0037** (0.018)	0.0037** (0.017)	0.0035** (0.020)					
Family	0.2020*** (0.002)	0.1970*** (0.003)	0.2008*** (0.002)				-0.2155*** (0.001)	
Wh/Foreign				0.2055** (0.035)	0.2084** (0.035)	0.2227** (0.026)		
Soe								0.3670** (0.012)
It/Tlc				0.1974* (0.051)	0.1963* (0.054)	0.1773* (0.070)	0.1794* (0.069)	0.2226** (0.029)
Consumers	0.1575** (0.011)	0.1538** (0.013)	0.1577** (0.011)					
Mh_ii	0.1189** (0.033)	0.1171** (0.036)	0.1168** (0.036)	0.0859 (0.126)	0.0865 (0.121)	0.0951* (0.089)	0.1287** (0.027)	0.1074* (0.057)
Age Board	-0.0019 (0.737)			-0.0111* (0.067)	-0.0111* (0.064)	-0.0131** (0.033)	-0.0134** (0.022)	-0.0147** (0.011)
% min_dir		-0.1604 (0.576)			0.0491 (0.849)		-0.3527 (0.222)	-0.5068 (0.181)
% ind_dir			-0.1831 (0.215)			0.3606** (0.027)	0.3694** (0.019)	0.2842* (0.088)
Obs	262	262	262	262	262	262	262	262
Pseudo R <sup>2</sup>	0.1499	0.1504	0.1534	0.0939	0.0940	0.1128	0.1375	0.1269

**Table 20 Female representation and some performance and governance outcomes. Mean comparison test**  
 (t statistics are reported. \*, \*\*, and \*\*\* indicate statistical significance at the 10%, 5%, and 1% level, respectively)

	<i>Performance outcomes</i>						<i>Governance outcomes</i>								
	Tobin's Q			Stock volatility			Attendance			Board meetings			CoRe Indicator		
	#	Mean	t	#	Mean	t	#	Mean	t	#	Mean	t	#	Mean	t
All-male board	149	1205	1.15	135	29.6	1.05	138	90.09**	2.03	143	11.19***	2.82	121	1.70	-0.84
Diverse board	129	1128		108	28.01		119	88.22**		125	9.26***		100	1.84	
<i>Diverse board companies</i>															
Family	63	1100	0.25	54	27.20	-0.69	58	87.98	-0.24	62	7.98***	-3.34	53	1.73	-0.85
Non-family	56	1081		47	28.95		51	88.35		53	10.81***		43	1.94	



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