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Date: **October-2016**

WORKING PAPER SERIES: 4/2016

CÁTEDRA CEU-MM
Madrid (Spain)
ISSN online: 2530-0237

Jobs for the Boys?
The Glass Ceiling and the Market for Corporate Control

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October 12th, 2016

Abstract

Women and ethnic minority groups hold few boardroom positions. In this paper, we adopt a novel empirical strategy to test whether this is caused by a lack of suitable candidates for director positions or, alternatively, by discriminatory barriers that prevent these groups from progressing up the corporate hierarchy. We study the determinants of director appointments following completed mergers and acquisitions. As directors at the acquisition target will be considered for an appointment at the newly merged firm, our approach allows us to observe the characteristics of successfully appointed target directors jointly with the characteristics of directors who have not been appointed to the board of the merged firm. Our results show empirical evidence consistent with biases in the recruitment of female directors. These findings cannot be explained by director or by merger/firm characteristics. We find no evidence that ethnic minority directors are less likely to be appointed to the board of the merged firm.

Keywords: Mergers and acquisitions; Director retention; Board diversity.
JEL codes: G34, J62, J63

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The authors are grateful Morten Huse, and the assistants to the 8th Biennial Gender, Work and Organization Conference, and the II Jornada Mujer y Empresa, for their useful comments. They are also grateful for the financial support from the Spanish government (MINECO-2012-32554) and from Cátedra CEU San Pablo – Mutua Madrileña.

1. Introduction

The proportion of female and ethnic minority directors at large listed firms has increased steadily over recent decades. However, the proportion of female and ethnic minority directors still remains much lower than the proportion of these groups further down the corporate hierarchy. Female directors held 19.9% of board seats in Fortune 500 companies and a mere 4.6% of CEOs positions (Catalyst, 2016), whereas ethnic minorities held 13.3% of board seats (Alliance for Board Diversity Census, 2013). High-profile executive appointments such as Mary Barra (General Motors), Indra Nooyi (PepsiCo) and Kenneth I. Chenault (American Express) therefore continue to be rare and exceptions to the rule as the corporate elites in the USA remain predominantly male and Caucasian.

The low representation of female and ethnic minority directors in boardrooms has given rise to the popular notion of a glass ceiling (Powell and Butterfield, 1994), which implies that the obstacles for certain groups of directors are greatest at the top end of the corporate hierarchy. The metaphor of a glass ceiling also implies that there are discriminatory barriers that prevent the promotion and progression of certain director groups up the corporate hierarchy. Discrimination in the labor market is unjust, in most cases illegal and, in so far as it bars the best talent from positions of influence, economically harmful (Becker, 1957). Consistent with the view that discrimination against certain director groups has detrimental economic effects, a growing literature on board diversity (e.g. Reguera-Alvarado et al., 2015; Johnson et al., 2013, Terjesen et al., 2009) views gender and ethnicity as proxies for unique resources that certain groups of directors may bring to corporate boards, such as diverse and valuable knowledge, information or skills (Wihters et al., 2012). Furthermore, there is evidence that group dynamics, decision-

making and outcomes are positively affected by ethnic board diversity (Carter et al., 2010; Hoogendoorn et al., 2013; Oxelheim and Randoy, 2003; Wang and Coffey, 1992).

In contrast to the glass ceiling perspective, a frequently asserted alternative view is that the continued dominance of male and Caucasian directors can be explained by there being a limited number of suitably qualified female and ethnic minority directors. This view holds that the lack of gender and ethnic diversity in boardrooms is ultimately due to supply-side factors and not to biases in the director appointment process. Such supply-side factors may be rooted in the fact that certain groups of directors differ in terms of values (Adams and Funk, 2012), personal considerations around family formation and family life, investment in human capital, or career paths (Gabaldon et al., 2016). All of these factors could have an impact upon the availability of suitably qualified candidates for boardroom appointments (Gregory-Smith et al., 2014) and may, therefore, explain why so few boardroom positions are held by these groups.

The crucial challenge for empirical studies that aim to investigate whether or not the recruitment of directors is biased against certain groups is a partial observability problem: the low representation of female and minority directors in itself is not sufficient to identify a recruitment bias. Both supply- and demand-side arguments may explain why male Caucasian directors dominate boards in the US and around the world. After all, studies on potential biases in the director selection process will typically only observe the characteristics of successfully appointed candidates. Data availability issues mean that these studies cannot observe information on qualified candidates who were considered for a directorship but not appointed. Yet, information on the latter group is crucial to understanding whether a glass ceiling exists. Therefore, an empirical set-up is needed

where all suitably qualified candidates for a directorship as well as the recruitment decisions can be observed to identify whether the low percentage of female and ethnic minority directors is actually rooted in barriers against these groups in the hiring process.

In this study, the empirical strategy we employ to test for potential biases in the recruitment of directors is based on board appointments after completed mergers and acquisitions (M&As). For each director on the board of the acquisition target, we estimate the probability that (s)he is successfully appointed to the board of the newly merged firm. Specifically, we estimate whether gender and ethnicity are factors that determine the recruitment of a director, while controlling for individual characteristics that also determine director recruitment such as age and experience. M&A are a suitable scenario for examining the role of bias in director recruitment because it is common practice for some directors on the board of the newly merged firm to be recruited from the board of the firm that was acquired. Harford (2003) finds on a sample of Fortune 1000 firms that, on average, 20% of executive directors are appointed to the board of the newly merged firm. Crucially for our study, it is fair to assume that directors at the target firm can be thought of as suitably qualified candidates that will be considered for a directorship at the newly formed company.

We analyze the boards of a sample of US listed firms involved in M&As and estimate the determinants of appointment of target firm directors to the board of the merged firm. Overall, our results point to biases in the recruitment of directors based on gender. Female target directors are less likely to be appointed to the board of the merged firm. We control for director and deal/firms characteristics to rule out alternative explanations for the appointment decisions driven by other director or deal characteristics.

Our study makes two main contributions. First, we contribute to the literature that examines the determinants of director selection. Director selection has long been an important issue in corporate governance research (Adams et al., 2010; Farrell and Hersch, 2005; Finkelstein et al., 2009; Hermalin and Weisbach, 1988). In particular, we contribute to the literature on director recruitment biases (Burke, 1997; Farrell and Hersch 2005; Gregory-Smith et al., 2014; Hillman et al., 2002; Mateos et al., 2011). Research in this area focuses on the gender of directors when directors are replaced and finds that firms are more likely to appoint female directors if a female director has recently left the board (Farrell and Hersch, 2005; Valenti, 2007).

Our paper uses a different empirical strategy that is based on changes in board composition after completed M&A deals. What makes our empirical strategy particularly suitable to study recruitment biases is that we can observe the characteristics of directors who were successfully appointed along with the characteristics of directors who would have been considered for an appointment but were not appointed. This enables us to isolate demand-side factors (such as recruitment biases) and supply-side factors (such as the availability of experienced candidates from minority groups on the target board). Therefore, the present study is able to disentangle demand- from supply-side arguments in a clearer way than previous research was able to.

Second, previous research focuses on the gender of directors (e.g. Adams and Ferreira, 2009; Carter et al., 2010; Mateos et al., 2011) and considerably less attention is paid to ethnic diversity. Some exceptions are Carter et al. (2003) who find that the probability of hiring an ethnic minority director in Fortune 1000 firms increases with firm size. Carter et al. (2010) examine the impact of African-American and Hispanic directors

on firm performance. Our study contributes to this literature by analyzing the potential recruitment biases based on ethnicity as well as on gender using our novel approach of post-merger appointments. Nevertheless from our results we are not able to find clear evidence consistent with recruitment biases ethnic minority directors.

The paper is organized as follows. In the next section we develop the theoretical framework and formulate the hypotheses. In section 3, we explain how we collect and treat the data to obtain the variables used in the analysis. In section 4, we present the results of the econometric analysis and in section 5 we estimate the economic impact. Section 6 discusses the obtained results.

2. Literature and hypotheses

In the widest sense, diversity in the boardroom includes gender, age, ethnicity, race, nationality, culture, religion, constituency representation, independence, professional background, knowledge, technical skills and expertise, commercial and industry experience, and career and life experience (Milliken and Martins, 1996; Singh et al., 2008). In this paper, we focus on gender and ethnic diversity.

Different explanations may lie behind biases in the recruitment of women and ethnic minorities on boards. There are several kinds of discrimination that can bias the selection process for the board of directors. First, taste-based discrimination may lead companies not to appoint suitably qualified female/ethnic minority candidates (Becker, 1957). Second, there might be some bias in the assessment of the abilities of women/ethnic minority candidates. Some of this bias are unconscious as in the implicit discrimination

(Bertrand et al., 2005), but it could be conscious and rationalized by the recruiter, as in the statistical discrimination described by Phelps (1972). Statistical discrimination occurs when women and ethnic minorities are judged according to the average characteristics of their group and not on the basis of their own personal characteristics. Third, mistake-based discrimination (Wolfers, 2006) refers to systematic underestimation of the skills of women or ethnic minority directors, and it is inefficient in contrast to statistical discrimination that can have some economic rationality when the information about the quality of the candidate is incomplete and costly to obtain.

Farrell and Hersch (2005) and Gregory-Smith et al. (2014) find evidence of gender bias in the appointment of female directors, for US and UK boards, respectively. These authors find that upon the departure of a director, the appointment decisions are biased toward replicating the gender of the departing director. Mateos et al. (2011) find evidence of several types of discrimination (taste-based, statistical and mistake-based) against women to explain the scarce presence of women on Spanish boards of directors. The authors argue that this is clearly inefficient, because it reduces the probability of choosing the best possible candidates for the company independently of their gender.

Other studies do not test for a direct gender bias in the appointment of female directors but try to find signs of biases and stereotypes, for instance, when being a woman or belonging to a minority group is an important factor behind director selection. Burke (1997) interviews women serving on Canadian boards of directors and finds that the nomination process is often the result of an 'old boy's network' where personal contacts and visibility to male board members is essential for appointment decisions. Hillman et al. (2002) find that female and African-American directors have more ties to other boards and

higher levels of education than their white male counterparts in Fortune 1000 companies. They argue that this could be a sign of salient effects and stereotypes about their ability to serve on corporate boards, in the sense that a certain level of success (e.g. advanced degree and/or prior board appointments) may help to overcome a perceived 'lack of fit' between women, racial minorities and corporate boards. Singh (2007) examines the presence of ethnic minority directors on FTSE 100 company boards and finds that ethnic minority directors have to have outstanding CVs and be known across a variety of sectors in order to be appointed.

Much less attention has been given to ethnic minorities in the literature, possibly because of lower levels of racial and ethnic diversity in the boardroom. The few studies on ethnic aspects of board demographics focus on the effects of ethnic diversity, group dynamics and decision-making, which in turn have an impact on the firm-level outcomes with somehow inconclusive results. Wang and Coffey (1992) find that the proportion of female and minority board members is positively related to corporate social performance, which, they argue, is because women and ethnic minorities tend to be more responsive to a greater variety of stakeholders than their counterparts. Carter et al. (2003) find a significant positive relationship between the fraction of women or ethnic minorities on the board and firm value on publicly traded Fortune 1000 firms. However, Carter et al. (2010) find no systematic evidence that ethnically diverse boards affect the financial performance of major US firms listed in the S&P 500 index. Brammer et al. (2007) investigate the ethnic diversity of the corporate board of UK companies and find that diversity is very limited and somewhat less pronounced among executive positions.

The previous discussion leads to two hypotheses linking gender and the ethnic background of directors in firms that were taken over to the probability that these directors will be appointed to the board of the merged firm.

Hypothesis 1: Female target firm directors are less likely to be appointed to the board of the merged firm.

Hypothesis 2: Hispanic, Afro-American and Asian target firm directors are less likely to be appointed to the board of the merged firm.

In order to test these hypotheses it is necessary to assume that among target board directors and conditional on the controls in the model men and women (and ethnic and not ethnic minorities) are equally qualified. In other words, the hypothesis assumes that gender (ethnic) differences in the probability of being appointed to the new board are not driven by differences in unobservable characteristics. The strategy used to test these hypotheses seems to be quite well identified since it only rely on the very plausible assumption that any unobservable differences between male and female (ethnic and non-ethnic minorities) candidates should be the same since all candidates come from the same board (the one of the target firm) and therefore they share a similar background. Therefore, it is not unreasonable to assume that these differences may be lower than it would be in the case of candidates to the board that had not previously been directors or come from different companies.

3. Sample and variables

In order to get our sample we have merged two separate databases: ISS Directors database (formerly RiskMetrics) that contains information on boards' composition and Thomson Reuters Mergers & Acquisition database.

For the mergers' data we need to stablish some restrictions in order to match them with ISS. We have selected deals between US firms (261,879 deals); where both target and acquirer are listed (39,436 deals); announced between 1996 and 2015 (25,335 deals); and, that lead to the acquiring firm owning more than 50% of the target firm's equity after the transaction (5,050 deals). As standard in the literature, we exclude privatizations, self-tenders, spin-offs, leveraged buyouts and recapitalizations (4,984 deals remain). Finally, we have excluded those deals not completed by the end of 2015 (4,958 deals remain).

Next, we match the M&A observations with ISS Directors database. For each deal, we need the board composition of the target firm the last fiscal year before the announcement of the merger and the board composition of the acquirer both before the announcement and after the completion of the deal. Since ISS Directors only contains director data for S&P 500, S&P MidCap 400 and S&P SmallCap 600 firms, this restricts the number of deals in our sample to 257, and 2,309 directors.

Finally, we have gathered individual information on directors such as age, gender and ethnic background from ISS that recovers this information from company proxy statements or annual reports. Where ISS records are incomplete, we have recovered missing data by hand collecting some data from proxy statements filed with the Securities and

Exchange Commission (form DEF-14A) as well as company publications and various online sources (e.g. Marquis Who's Who, NNDB).

3.1 Dependent variable

The dependent variable (*Appointment*) measures whether or not target firm directors are appointed to the board of the merged firm following the completion of a deal. Specifically, 'Appointment' equals 1 for each director who is on the board of the firm that was acquired the year prior to the acquisition announcement as well as on the board of the merged firm one year after completion of the merger. The variable is 0 otherwise.

3.2 Independent variables

In the search of possible bias in the new board member appointment decision, apart from a gender dummy variable (*Female),* we define three ethnic minority variables: Afro-American (*Ethnic: African-American*), Hispanic (*Ethnic: Hispanic*) and Other minority groups (*Ethnic: Others*).

3.3 Control variables

Next, we detail the control variables regarding additional personal information on individual directors used in the estimations along with some rationale for their inclusion.

First, we have included a set of variables related to personal and professional characteristics of the director: Age, Tenure, Voting power, Number of other board positions, Independent and Attendance.

Age can have an effect on the probability of retention since most pension schemes for US executives allow retirement on full benefits at the age of 65. Traditionally, most of the seats of corporate boards have been shared by middle to retirement aged members

(Gilpatrick, 2000). Indeed, Kang et al. (2007) found that a majority of directors are aged between 51 and 70 in Australian largest listed companies. So, we have a dummy variable (*Age 65*) that takes value 1 if the director is older than 65 and 0 otherwise. We choose this value because 65 is the typical retirement age and directors are unlikely to be retained beyond this age. Extant research suggests that the effect of director age on firm outcomes is equivocal because it is a proxy for both experience and risk aversion (Johnson et al., 2013). In this regard, director age can be seen as an indicator for valuable experience but also higher risk aversion.

Target directors with experiential knowledge of a firm that is valuable to the acquirer are less likely to leave post-acquisition (Li and Aguilera, 2008). Prior studies have used this variable to measure firm-specific human capital of groups (Kor and Sundaramurthy, 2009; Fischer and Pollock, 2004; Hitt et al., 2001). Therefore we include as a control the director's tenure on the target's board (*Tenure*) calculated as the difference between the effective acquisition's date and the date service began.

Voting Power measures the percentage of the company's total voting power controlled by the director. Finkelstein (1992) argue that executive power is an increasing function of a manager's personal equity holdings. Lasfer (2006) found that firms in the UK with low managerial ownership had higher proportions of non-executive directors and were more likely to change their board structure to comply with the UK`s Cadbury recommendations. In a similar vein, Young et al. (2008) found that board independence decreases with managerial ownership for a sample of listed companies in Taiwan. Therefore *Voting Power* can be consider as a proxy of the director bargaining power.

We also add a variable to measure the number of other board positions that a director has (*Number other boards*). This variable reflects director external social capital and general director human capital because membership on multiple boards enhances a directors' network connection and knowledge repository developed due to exposure to a variety of strategic and governance issues (Certo et al., 2001; Kim and Cannella, 2008). Li and Aguilera (2008) propose measuring social capital by whether a target director can bridge the structural holes in the inter-firm networks of the newly formed firm and offer non-redundant sources of information. Therefore, director selection may reflect the social capital a potential director possesses

Independent control identifies to a director that has no significant connection with the firm according to IRRC. It is measured as a dummy variable that is equal to 1 if the member has no significant connection with the firm and 0 otherwise. One of the most recommended practice of good corporate governance is that corporations should, in an effort to enhance the effectiveness of the board, constitute a board with a majority of independent directors. This is with a presumption that they can make a positive contribution to the board's monitoring responsibilities (Anderson et al 2004; Brennan and McDermott, 2004; Fields and Keys, 2003), Nevertheless, as Adams et al. (2012) point out that when the CEO of the board has some degree of bargain power he/she prefers less independent board.

We include a measure of director effort in the way of an indicator variable that takes value 1 if the director attended less than 75 percent of board and committee meetings (*Non attendance*). Since, Adams and Ferreira (2009) found that female directors have better attendance records than male directors, we include *Non attendance* variable as a control along with *Female* to take this into account.

There seems to be a systematic bias against females in assignment to top board committees. Peterson and Philpot (2006) found that female directors are less likely than male directors to sit on executive committees and more likely than male directors to sit on public affairs committees. Adams and Ferreira (2009) found that women are more likely to join monitoring committees. To take the possible existence of this bias into account, we have also included a series of dummies for major committee service on the target company board: Nominating (*Member: Nomination*), Compensation (*Member: Compensation*), Audit (*Member: Audit*) and Corporate Governance Committees (*Member: Governance*).

Finally, we include deal/firm dummies in order to control for merger/firms characteristics (such as relative size, industry, deal type, hostility, institutional investor ownership or the percentage of the bidder company's revenue from female vs. male customers) that might affect the number of board directorships available for the target company and, thus, the probability that target directors are appointed to the new board.

4. Main results: Recruitment biases

Regarding the descriptive statistics, shown in Table 1, on average only a 12.2 % of the target board directors are appointed to the board of the newly merged firm. This result is quite below the average retention rate of 20% found Harford (2003) for executive directors which it is not surprising since our sample also includes independent directors that usually have a lower probability of retention. The sample includes a 9.7% of women directors, and a 6.8% of ethnic minorities (4.4% are African-American; 1.1% are Hispanic; and 1.3% belongs to other minorities).

In a regression framework, in table 3, we have estimated two limited dependent variable regression models on the probability of director appointment after and M&A in order to evaluate the possible presence of gender and ethnic biases in the recruitment processes. Columns 1 and 4 (logit and probit models respectively) estimates only the effects of Female and Ethnic minority directors along with the variable that indicates if the director is aged over 65. Columns 2 and 5 add a set of control variables related to personal and professional characteristics of the director: voting power, number of other board positions, tenure, independent and attendance. Finally, columns 3 and 6 includes series of dummies for major committee service on the target company board. In all cases, both Hosmer-Lemershow and Pearson goodness of fit test confirm the models are correctly specified; (McFadden) Pseudo R squared shows between 43-44% improvements in the likelihood over an intercept model; and the proportion of correctly predicted appointments are around 90%. All these measures show that the models are doing a good job at predicting the appointment of the potential directors.

Concerning the effects of variables related with the hypotheses testing results, we observe that female directors have less probability of being appointed after an M&A as reflected in the negative and significant coefficient of the variable female (columns 1 and 4). These result is consistent with biases in the recruitment of female directors and is consistent with hypotheses 1a. This effect remains significant, although only marginally, after taking into effect controls related to personal and professional characteristics of the director (models 2 and 5) and those related with major committee service (columns 3 and 6). Perhaps unsurprisingly, the negative and highly significant coefficient of aged over 65 indicates that

directors who are close to or above the typical retirement age are less likely to be appointed to the board of the newly merged firm.

Regarding control variables, we find that *Non attendance* has a negative and highly significant coefficient in the probit model (columns 5 and 6) suggesting that little effort or lack of dedication by the target director in his/her previous performance is heavily penalized when making appointments to the board of the newly merged firm. Another result worth mentioning is the sign on the dummy variable for service on Audit committee. Surprisingly, we find that major service on the target company audit committee has a negative impact on the selection of directors to join the bidder's board. This result is in line with the cost of a takeover bid documented by Harford (2003) to outside target directors that he interpreted as a penalty for failing as monitors forcing the external control market to act for them.

5. Economic Significance

In addition to the statistical significance of the director's gender that we have shown in previous section, it is also important to assess the economic relevance of this variable. With this goal, we have quantified the change in the probability of being retained after a merger produced by the gender of the director.

In order to do so, for each of the directors in the sample we have computed the estimated probability of retention obtained from the full models 3 and 6 (logit and probit) and also the probabilities of a mirror/counterfactual "director" in the same company, with the same characteristics, ethnicity, age, personal and professional characteristics, and major committee service (all the variables included in the model), but we change the gender: to a

woman if the observed director was a man; or a man if the observed one was a woman. Once we have those pairs of probabilities, we can compute the change in the retention probability of a director that is directly related with the gender of the director and isolated of any other factor.

The results of this analysis are shown in Table 4. As can be seen, in the case of the logit model (model 3), a female director has an average 35.4% of the probabilities of the male director, for the same merger, and director characteristics. Although this reduce likelihood of retention vary a lot among the sample, with 90% confidence interval ranging between 5.6% and 56.4% of the male director probabilities of retention. Using the probit model (model 6), we get a slightly less negative position for the female directors, with a probability of retention of 66.1% of the one of a male director in the same company with the same characteristics (49.5%-85.4% confidence interval).

A similar analysis can be produced for other variables in the models. Thus, probabilities of retention after a merger for directors belonging to an ethnic minorities are on average a 22.8% (44.1%) for Hispanic, 50% (94.7%) for African-American, and 31.2% (63.4%) for other minority groups with respect to the Caucasian majority, according to the logit (probit) model. For the age, we get that once the director reach the age of retirement, the likelihood of retention after a merger is a fifth of the ones she/he has before reaching 65 years old, according to the logit model, and a 43.4% according to the probit model.

6. Conclusion

In this paper, we shed some new light on the debate over the reasons for the low representation of female directors in corporate boardrooms. Our empirical set up allows us to isolate demand-side factors (i.e., unwillingness to hire female directors, the so-called glass ceiling effect) from alternative explanations based on supply-side factors (i.e., reduced pool of female candidates with a suitable profile, female considerations and constrains, values, work-family conflict, and career decisions) that sometimes have been considered in the literature (Gabaldon et al., 2016).Our main results show that female candidates face a negative hiring bias. Female candidates are between 1/3 and 2/3 less likely to be added to the acquiring firm's board than their male counterparts. These results are obtained after controlling for firm, personal and professional characteristics.

Our results have important implications since they identify a clear bias in the recruitment of women to the corporate elites. Additionally, it may be economically harmful if this bias reduces the probability of choosing the best candidates for the post, independently of their gender group.

Evidence of bias in the appointment process supports a range of initiatives aimed at overcoming such biases. The effectiveness of each initiative depends on the cause of the bias. For instance, if the cause of the bias is implicit discrimination (Bertrand et al., 2005), in the sense of unintentional or outside of the discriminator awareness, a thorough review of the search, screening and selection activities in the recruitment processes for board positions may be enough to reduce/eliminate such biases. However, if the bias is conscious,

as in statistical (Phelps, 1972) or taste-based discrimination (Becker, 1957), such initiatives would be ineffective. To tackle conscious bias, institutional pressure or legislation are a solution.

Our results indicate the presence of recruitment biases against female board candidates. Therefore, our results back the spirit of quotas and other statutory initiatives that are designed to overcome biases in the recruitment of female and ethnic minority directors.

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Table 1: Summary statistics

	Obs	Mean	Std. Dev.	Min	Max
Appointment	2309	0.122	0.328	0	1
Female	2309	0.097	0.296	0	1
Eth_hispanic	2309	0.011	0.106	0	1
Eth_african_american	2309	0.044	0.205	0	1
Eth_others	2309	0.013	0.111	0	1
Age>65	2308	0.288	0.453	0	1
Voting_power	2309	1.012	5.891	0	86.2
Number_other boards	2309	0.860	1.211	0	9
Tenure	1968	8.137	7.061	0	56
Independent	2309	0.715	0.451	0	1
Non_attendance	2309	0.014	0.117	0	1
Member_audit	1966	0.406	0.491	0	1
Member_compensation	1966	0.401	0.490	0	1
Member_governance	1966	0.280	0.449	0	1
Member_nomination	1966	0.355	0.478	0	1

Table 2: Correlation matrix

	Appointment	Female	Eth_hispanic	Eth_africanamerican	Eth_others	Age65	Voting_power	Number_other_boards	Tenure	Independent	Non_attendance	Member_audit	Member_compensation	Member_governance	Member_nomination
Appointment	1.000														
Female	0.005	1.000													
Eth_hispanic	-0.016	0.007	1.000												
Eth_africanamerican	0.040	0.127	-0.025	1.000											
Eth_others	-0.007	0.017	-0.014	-0.027	1.000										
Age65	-0.076	-0.100	-0.044	-0.064	-0.031	1.000									
Voting_power	0.015	0.014	-0.014	-0.034	-0.021	-0.017	1.000								
Number_other_boards	0.077	0.058	0.016	0.130	-0.015	0.066	-0.072	1.000							
Tenure	-0.049	-0.070	-0.030	-0.041	-0.057	0.331	0.167	-0.044	1.000						
Independent	-0.039	0.133	0.068	0.089	-0.006	0.154	-0.231	0.170	-0.146	1.000					
Non_attendance	-0.038	-0.033	0.035	0.003	-0.012	0.004	-0.016	0.003	-0.015	0.001	1.000				
Member_audit	-0.065	0.048	0.035	0.005	-0.056	0.065	-0.139	0.053	-0.062	0.392	0.024	1.000			
Member_compensation	-0.039	0.001	0.018	0.017	-0.011	0.102	-0.092	0.089	-0.005	0.410	-0.007	0.044	1.000		
Member_governance	-0.004	0.062	0.041	0.079	0.011	0.166	-0.087	0.053	0.028	0.310	-0.027	0.023	0.111	1.000	
Member_nomination	0.007	0.030	0.049	0.080	0.001	0.173	-0.038	0.095	0.046	0.306	-0.008	0.028	0.169	0.817	1.000

Table 3: Probit and Logit estimation of the probability of director appointment

	Logit			Probit		
VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.571**	-0.539*	-0.495*	-0.345**	-0.323*	-0.307*
	(0.291)	(0.300)	(0.296)	(0.168)	(0.172)	(0.170)
Eth_hispanic	-0.918	-0.797	-1.012	-0.588	-0.499	-0.572
	(1.030)	(1.110)	(1.284)	(0.624)	(0.662)	(0.734)
Eth_africanamerican	0.025	0.050	-0.106	0.024	0.039	-0.042
	(0.451)	(0.450)	(0.466)	(0.259)	(0.259)	(0.268)
Eth_others	-0.539	-0.578	-0.659	-0.236	-0.258	-0.330
	(1.255)	(1.241)	(1.279)	(0.687)	(0.685)	(0.695)
Age65	-1.201***	-1.013***	-1.055***	-0.715***	-0.604***	-0.631***
	(0.224)	(0.236)	(0.240)	(0.126)	(0.135)	(0.136)
Voting_power		0.054	0.050		0.027*	0.026*
		(0.038)	(0.035)		(0.015)	(0.014)
Number_other_boards		0.139	0.146*		0.079	0.082
		(0.086)	(0.086)		(0.052)	(0.051)
Tenure		-0.010	-0.010		-0.006	-0.006
		(0.019)	(0.020)		(0.011)	(0.011)
Independent		-0.261	-0.092		-0.179	-0.078
		(0.226)	(0.271)		(0.133)	(0.161)
Non_attendance		-16.566	-17.977		-4.472***	-4.421***
		(0.000)	(0.000)		(0.120)	(0.124)
Member_audit			-0.406**			-0.242**
			(0.202)			(0.116)
Member_compensation			-0.226			-0.130
			(0.228)			(0.132)
Member_governance			0.231			0.152
			(0.474)			(0.270)
Member_nomination			0.174			0.101
			(0.411)			(0.233)
Constant	-18.409	-19.018	-18.691***	-5.663***	-5.643***	-5.622***
	(168.578)	(.)	(2.145)	(0.177)	(0.239)	(0.246)
Observations	2,308	1,967	1,965	2,308	1,967	1,965
Deal/Firm dummies	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R2	43.29%	43.75%	44.00%	43.37%	43.84%	44.13%
Hosmer-Lemeshow	1.28	3.38	4.59	2.74	3.81	5.26
Pearson chi2	219.27	788.10	806.93	215.63	765.22	789.22
Sensitivity	35.46%	36.80%	37.50%	34.04%	36.80%	37.10%
Specificity	97.63%	97.32%	97.03%	97.73%	97.20%	96.97%
Correctly classified	90.03%	89.63%	89.52%	89.95%	89.53%	89.41%

Logit (1-3) and Probit (4-6) models where the dependent variable is equal to 1 if the target's director is appointed to the board of the acquirer. Independent variables: *Female* (1 if female; 0 if male); *Eth_hispanic*, *_africanamerican*, and *_others* (1 if the director is Hispanic, African-american or belong to other minority; 0 if Caucasians); *Age65* (1 if age > 65); *Voting_power* (proportion ranging 0-100); *Tenure* (number of years in the position); *Independent* (1 if the director is independent); *Non_attendance* (1 if attended less than 75% of the meetings); *Number_other_boards* (number of directorships held); *Member_audit*, *_compensation*, *_governance*, *_nomination* (1 if the director is part of the Audit, Compensation, Governance or Nomination committees). All models have a dummy variable for each deal. Robust standard errors clustered by deal in parentheses. Stars indicate if the p-value is below the following thresholds: *** p<0.01, ** p<0.05, * p<0.1.

Table 4: The effect of variables on the probability of director appointment

Logit Model (3)

	mean	median	min	max	p5	p95
Female	0.354	0.383	0.001	0.603	0.056	0.564
Eth_hispanic	0.228	0.249	0.001	0.360	0.049	0.342
Eth_africanamerican	0.500	0.534	0.001	0.888	0.070	0.828
Eth_others	0.312	0.339	0.001	0.512	0.058	0.484
Age65	0.200	0.214	0.001	0.345	0.038	0.317

Probit Model (6)

	mean	median	min	max	p5	p95
Female	0.661	0.651	0.394	0.977	0.495	0.854
Eth_hispanic	0.441	0.418	0.164	0.945	0.243	0.705
Eth_africanamerican	0.947	0.947	0.886	0.998	0.911	0.980
Eth_others	0.634	0.624	0.366	0.975	0.462	0.830
Age65	0.434	0.410	0.135	0.936	0.240	0.702

Effect of belonging to the respective group on the probability of a target's director of being appointed to the board of the acquirer firm. The effect is computed using the estimated parameters of the full models in Table 3 (columns 3 and 6). For each of the directors in the sample, the probability of appointment is computed for both the case where the variable under the study is equal to 1 or 0, retained the remaining characteristics of the director and deal. Then the effect on each individual is the ratio of the probability of being in the discriminated group divided by the probability of not being in the group. From the sample distribution, the table report mean, median, minimum, maximum, and percentiles 5 and 95. Variables considered are: *Female* (1 if female; 0 if male); *Eth_hispanic*, *_africanamerican*, and *_others* (1 if the director is Hispanic, African-american or belong to other minority; 0 if Caucasians); and *Age65* (1 if age > 65).