# Does the Rolodex Matter? Corporate Elite's Small World and the Effectiveness of Boards of Directors

**BANG DANG NGUYEN ***

**Judge Business School, University of Cambridge**

**This draft: February 26, 2011**

**Abstract**

This paper investigates the impact of social ties on the effectiveness of boards of directors. When the CEO and a number of directors belong to the same social networks, the CEO is less likely to be dismissed for poor performance. The results are robust to different measures of performance and networks, consistent after controlling for CEO ability, and not due to connected boards' superior information. Socially connected CEOs are also more likely to find new and better employment after a forced departure. Evidence from the paper suggests that close social ties among board members impact the workings of the board of directors.

**Keywords**: Social Ties, CEO Turnover to Performance, Board of Directors, Corporate Governance

**JEL Classifications**: G3, G30

I am grateful to François Degeorge for his guidance and continuing support for this research since its inception. I thank François Derrien, Joseph Fan, Eliezer Fich, Stuart Gillan, Vidhan Goyal, Jarrad Harford, Uli Hege, Rob Heinkel, Larry Lang, Kai Li, Ernst Maug, Thomas Philippon, Myron Slovin, Marie Sushka, Armin Schwienbacher, Jordan Siegel, David Thesmar, Daniel Wolfenzon, T.J. Wong, and David Yermack for helpful discussions and suggestions. The paper also benefits from insightful comments from seminar participants at the HEC Paris, the French Finance Association June 2005 International Meetings in Paris-La Défense, the Merton Miller Doctoral Seminar/EFMA June 2005 Meetings in Milan, the Northern Finance Association October 2005 Meetings in Vancouver, the European Finance Association August 2006 meetings in Zurich, the September 2006 Workshop on the Politics of Corporate Governance at the Copenhagen Business School, the CUHK November 2006 seminar, the 2007 WFA meetings at Big Sky resort, and the Asian Finance 2008 Meetings in Yokohama. Assistance with data from the Editions des Etats-Majors, especially from Caroline Crabos, is gratefully acknowledged. All errors are mine.

* Bang Dang Nguyen, Finance and Accounting Group, Judge Business School, University of Cambridge, Cambridge CB2 1AG, United Kingdom. Tel: (+44) 1223 760 740; Fax: (+44) 1223 339 701; E-mail: b.nguyen@jbs.cam.ac.uk

## 1. Introduction

The effectiveness of boards of directors as monitors of CEO performance continues to be a major issue in corporate finance literature. The matter has become even more crucial in light of recent corporate scandals which highlight many shortcomings in the functioning of governance mechanisms. The measurement of the effectiveness of boards of directors, however, proves to be a challenging task as most of the day-to-day actions of boards are unobservable. Consequently, prior research on board effectiveness has focused mainly on the relationship between observable board characteristics (i.e. board size, ownership, and composition) and various corporate outcomes such as firm performance and firm value.

This paper analyses whether informal relationships between CEOs and directors impact board monitoring and firm governance.[1] When a CEO and a number of his board directors belong to the same social circles, their connections might prevent the board from monitoring the CEO effectively. Influencing even a few board members via social ties might be highly beneficial from the viewpoint of a CEO. These directors might represent the pivotal votes he needs in case his authority is challenged. Even more crucially, directors with social connections to the CEO might be more lenient and less likely to challenge the CEO in the boardroom.

In light of the literature on social networks, I propose a set of proxies for social ties between a CEO and board directors based on the exclusivity of group membership: the more exclusive the group to which they belong, presumably the stronger the tie. I carry out empirical analysis using a sample of largest publicly-traded firms in France between 1994 and 2001. France's corporate elite provides a suitable experimental setting in which to test my central hypothesis. The French business elite is widely perceived as a close network of long-term friendships, most of them formed while studying at a very small number of elite colleges called the Grandes Ecoles. The popular belief is that relationships formed in elite social circles protect a CEO from being criticized or punished when his firm performs poorly and mitigate board monitoring.[2]

[1] It has also been suggested that an effective board should serve the management team in an advisory capacity (for example, Adams and Ferreira (2007)). This paper's focus on the monitoring role of boards of directors does not preclude the advisory role of boards, but this latter role is outside the scope of the present study.

[2] Later in the paper, I discuss the literature showing that elite social networks and the "small world" phenomenon are not concepts exclusive to France. In the United States and in Britain, for example, many CEOs are respectively Ivy League or Oxbridge graduates, exhibiting many of the same boardroom behavioural characteristics found in their French counterparts.

I find, first, that CEO turnover is negatively and significantly related to prior performance in a sample of French firms. Board monitoring thus appears to be generally effective. This result reconfirms prior studies which document a strong negative relationship between firm performance and subsequent CEO turnover in the U.S. (Coughlan and Schmidt (1985), Warner et al. (1988), Weisbach (1988), Denis et al. (1997)) or in other countries, in spite of large differences in legal and social environments (Hermalin et al. , 2003; Denis and McConnell, 2003). The sensitivity of CEO turnover to performance, which is reported to be stable over time (Parrino (1997) and Huson et al. (2001)), is my primary benchmark for the effectiveness of board monitoring.[3]

Second, and more importantly, this study provides evidence of the impact of social networks on board monitoring. Strong social ties between a CEO and a number of board members are not necessarily a negative factor for firms. On one hand, they can provide superior communication and information exchange that are indispensable for leaders of large organizations (Simon et al. (1992), Barber et al. (1995), Cohen et al. (2007), Schmidt (2008) among others). On the other hand, close social ties might diminish the effectiveness of boards of directors (i.e., Kramarz et al. (2006), Barnea et al. (2007)). Many allegations in the popular press and from small shareholders suggest that the corporate elite which too closely tie together hurt shareholder interests. Thus, the effect of social networks on board monitoring is not a trivial empirical question. Findings from this paper show that when the CEO and a number of directors belong to the same social circles, the CEO is provided with double protection. He is less likely to be ousted for poor performance and more likely to find a new and good job after being fired. The result appears robust to different measures of performance and networks, and are not due to CEO ability or connected boards' superior information.

My study relies on a large body of sociological literature. In many countries, top executives enjoy an elite education, share membership in prestigious social and professional associations, and sit on the boards of large firms. They form a tightly-knit circle. This leads Mills (1956, p. 294) to observe that the corporate elite "often seem to know one another, seem quite naturally to work together, and share many organizations in common." Sociologists have developed two main theories. One, the resource dependence theory (see, for example, Useem (1984), Pfeffer and Salancik (2003)) postulates that members of the corporate elite are linked together by

[3] In a recent paper, Jenter and Kanaan (2010) find that poor industry/market performance, which is a factor beyond CEO control, also affects CEO turnover. This paper focuses on the sensitivity of CEO turnover to performance, and takes into account the impact of the market performance and industry performance by using market-adjusted and industry-adjusted performance.

particular core institutions, such as banks, which act as a "switchboard" connecting disparate directors. It views networks as unplanned in nature and as an unintended consequence of increasing economic concentration. A second sociological theory, the social class theory (for example, Bonacich (1987) and Soref (1989)) argues that the corporate elite reflect the internal structure of the capitalist class, stockholders, and business ties. Milgram (1967) quantifies the "small world" issue, finding that, under certain assumptions, the average number of social links between any two individuals selected randomly from the population is only six. Wasserman and Faust (1997) and Watts (1999) study preconditions for the existence of the "small world" phenomenon. These theories share some common assumptions. Both theories assume that the corporate elite belong to a small world composed of a close network of nodes and dyads. In both theories, the distance between directors is short, and the network of the corporate elite is quite resilient and stable over time.[4]

My study also builds on a growing body of literature that provides empirical evidence on the impact of social networks in management, finance, and economics. Barber et al. (1995) provide evidence that acquisitions in the U.S. during the 1960s were partly influenced by the position of a firm's managers and directors in the social network of the business elite. Simon et al. (1992) argue that "old boy" networks reduce employers' uncertainty about worker productivity. Workers hired through such networks earn higher initial salaries and stay on the job longer than comparable workers hired from outside the network. Kramarz and Thesmar (2006) find that a board dominated by members of a network in France tends to favor the recruitment of new directors from the same network. Hallock (1997), Larcker, Richarson, Seary and Tuna (2005), Barnea and Guedj (2007) report evidence that connections between directors and top executives are related to executive compensation. Cohen, Frazzini and Malloy (2007) find that portfolio managers overweigh firms they are connected to through their networks of shared education, and perform significantly better than the holding relative to non-connected firms. Hochberg, Ljungqvist, and Lu (2007, 2010) show that venture capital social networks influence investment performance. Kuhnen (2009) reports that ties between fund directors and advisory firms cause preferential hiring, but do not significantly impact fund investors' welfare. Schmidt (2008) finds that social ties between the CEO and boards impact bidder announcement returns in mergers and acquisitions.

[4] Further sociological analysis and evidence in regard to the "small world" phenomenon can be found in Brandeis (1914), Mills (1956), Mizruchi (1982), Bonacich (1987), Useem (1984), Soref (1989), and Watts (1999) for the U.S. and the U.K., and Bauer and Bertin-Mourot (1997) for France. Davis and Greve (1997) and Davis et al. (2003) provide details on the small world of the contemporary corporate elite in the U.S.

My paper contributes to the literature along several lines. First, it studies board effectiveness from a social network point of view and shows that social ties significantly impact the effectiveness of boards of directors. To the best of my knowledge, it has been among the first papers in finance which study the social networks in boards of directors.

Second, evidence from this study might have implications for the ongoing debate on the independence and the effectiveness of boards of directors both from the research and regulatory points of view. Prior research and regulations focus on visible board and governance features and on disclosure rules and do not take into account sociological factors such as top executives' social ties, which are, as this paper shows, less observable yet non-negligible determinants of board effectiveness. Results from the paper provide guidance for regulators who have focused only on visible features of board of directors, broadening the analysis to include factors such as social connections and common educational backgrounds. While these ties among corporate elites are not readily observable, let alone quantifiable, to ignore them might result in overregulation or inefficient regulation. It is not surprising that academicians and practitioners have not been unanimous regarding the effectiveness of new regulatory reforms such as the Sarbanes-Oxley Act of 2002 in the U.S.

Third, results from this paper provide international evidence for the growing body of literature on the correlations between social networks and finance. Far from being specific to France, the small world phenomenon is relevant for corporate governance in many countries. A number of sociological studies have shown that informal social links between executives are a prevalent feature in many countries (Useem (1984)). The U.S. economy, for instance, is much larger than that of France, with more deregulated and competitive product markets, many mature industries, and a vibrant high-tech sector. The U.S. also counts many more elite institutions of higher learning than France, not surprising in a large nation where a university education, for a number of historical reasons, is much more accessible than in other mature economies. Top executives' social ties might therefore be of a different nature than those found in France. Yet many sociologists, including Brandeis (1914), Useem (1984), Davis and Greve (1997), and Davis et al. (2003), have pointed out that the corporate elite's small world is also a typical feature in U.S. business. Recent finance literature (Barber et al. (1995), Larcker, Richarson, Seary and Tuna (2005), Hallock (1997), Barber and Palmer (2001), Cohen, Frazzini and Malloy (2007 and 2010), Hochberg, Ljungqvist, and Lu (2007, 2010), Barnea and Guedj (2007), Schmidt

(2008)), and Kuhnen (2009) provides evidence on the impact of social ties and points toward the broader prevalence of the influence of social linkages across numerous finance issues.[5]

The remainder of the paper is organized as follows. Section 2 describes the database and empirical strategy. Section 3 provides descriptive statistics of the social ties of CEOs and board directors. Section 4 presents empirical findings. Section 5 reports robustness checks and discusses interpretation of the results. Section 6 concludes.

## 2. Sample selection and data description

### 2.1. Sample selection

The sample of companies for this study is drawn from Le Guide des Etats Majors (henceforth, Le Guide) for the years 1994–2001. This directory provides annual updates of the board members of the largest public and private companies in France, as well as their biographical information. The number of firms selected by Le Guide has been increased by the end of the sample period (200 firms per year from 1994 to 1996, 300 in 1997, and 400 from 1998 to 2001.) This necessitates a robustness check on a sub-sample of firms which remain in the sample for at least 4 out of 8 years of the sample period.

The original sample comprises a total of 2,500 firm-year, or 5,000 semi-annual observations. Since this paper focuses on publicly-traded firms, a number of large private companies are eliminated from the original sample. The sample includes the majority of firms in the Paris Stock Exchange SBF120 index of the 120 largest public firms in France at the beginning of the sample period, and, for more recent years, the majority of the SBF250 index firms. The final sample includes 2,536 firm-semesters of listed firms from 1994-2001.

The unique dataset for this study draws from four different sources. Ownership structure information is obtained from the Dafsaliens. Detailed information on board characteristics and directors is taken from Le Guide, and information on CEO turnover is provided by the editor of Le Guide. Datastream provides stock and accounting data. In some cases, certain data are not available: for example, I am unable to collect information on CEO ownership below the 5% level (above which disclosure is compulsory) if it is not included in the firm's annual report.

Table 1 provides summary statistics of firms in the sample. Firms are relatively large, with an average market capitalization of 5.5 billion euros. Ownership is highly concentrated with most

[5] Allen et al. (2008) provide an excellent review of social networks in finance.

firms having one large shareholder (henceforth, a "blockholder"). The median board size, which is 12, is similar to that of U.S. firms (Yermack, 1996). The CEO turnover rate is 6% per semester. 21% of CEOs are founders.

[Insert Table 1 about here]

### 2.2. CEO turnover

French firms can choose between one-tier or two-tier board structure. A majority of the large public companies in France have one-tier board structure (80% of firms in my sample), in which the CEO also assumes board chairmanship. A minority of firms have a two-tier board structure, which separates the CEO from board chairmanship function and features a Supervisory Board (Conseil de Surveillance) and a Management Board (Directoire). I define CEO turnover as the departure of the CEO or the Chief Executive (President du Directoire).

Le Guide provides substantial information on CEO turnover. For each event, it gives details about the former CEO's name and education, the month of the turnover, and the new CEO's name, education, and former employment. In addition, the Guide specifies the cause for the turnover. I follow Denis et al. (1997) and Parrino (1997, pages 171-172) to classify CEO turnovers into forced and voluntary based on the Guide's information as well as on newspaper reports surrounding each event. Whenever the press explicitly reports that a CEO is fired, forced out, or retires or resigns due to policy difference, the CEO departure is classified as "forced." CEO departures due to reaching mandatory retirement age are classified as voluntary. When a CEO leaves a firm before the retirement age (before the age of 60 in France), the case is classified as forced if the press does not report the reason as death, poor health, or the acceptance of another position (including the chairmanship of the board or other honorary positions), or the press reports that the CEO is retiring, but does not announce the retirement at least six months before the turnover.

I also collect information on CEO employment after the turnover. If a former CEO takes a comparable or better position elsewhere immediately after the event, or there is report that the turnover is indeed a promotion, a turnover previously classified as forced is reclassified as voluntary. CEO turnovers caused by mergers and spin-offs are excluded. I cross-check all available information related to each CEO turnover against the Lexis-Nexis and Factiva databases, and Les Echos newspaper to assure the reliability of the CEO turnover classification.

I set up two variables for CEO turnovers. The CEO forced turnover dummy is set equal to one if there is a forced turnover, and equal to zero if there is no turnover or a voluntary one. The voluntary turnover dummy is set equal to one if there is a voluntary turnover, and equal to zero if there is no turnover or a forced one. Over 2,536 firm-semesters, I identify 179 CEO turnovers, of which 70 are voluntary and 109 are forced.

### 2.3. Firm performance, ownership, and board characteristics

As stock performance benchmarks, I use the two-, three-, and four-semester lagged share price performance prior to the semester in which the CEO change occurred, adjusted to a broad market index (SBF250), and to an industry index. Performance variables are obtained from Datastream.

In the empirical analysis, I also control for board characteristics such as board size, legal form (one-tier or two-tier board), and the proportion of inside directors. Board size is the total number of board members if the board is one-tier and the total number of Supervisory Board members if the board is two-tier. As Table 1 reports, mean board size is 11.42 directors, with a maximum of 25, and "insiders" occupy about 14.5% of total board seats.

Ownership data are collected from the Dafsaliens annual database. A blockholder is defined as any individual or corporate shareholder, except institutional investors, with a substantial holding. I create dummies at the 5%, 10%, 15%, 25%, 33%, and 50% ownership thresholds at the beginning of each year. As reported in Table 1, the ownership of French public corporations is highly concentrated: 37.2% of firm-semesters feature at least one 50% blockholder, and 58.7% have at least one 33.3% shareholder (the blocking minority level). Virtually every company (96.6%) has at least one 5% blockholder. I also create dummies for institutional ownership at the 2%, 5%, 10%, 33%, and 50% thresholds. About one-third of the firms (28.9%) have at least one institutional investor that holds a 5% stake.

## 3. Measurement of social ties of the corporate elite

### 3.1. CEOs' small world

I measure social ties through common membership in a social group: the more exclusive the group, presumably the stronger the tie. In the context of France, the most relevant social groups for the study of the closeness of potential social links are the elite college education (Grandes

Ecoles) and the relationship through elite civil service (Grands Corps de l'Etat.) Being very stable, social ties from education are also, according to the sociology literature, the most important ones after religion. Membership in these three groups all causes a high level of interaction and a long relationship length, presumably for the duration of one's career.[6]

CEOs and directors' elite education constitutes the first and broadest measure of their potential social ties in this study.[7] The education of the French corporate elite usually begins in a Grande Ecole, one of just a few select French colleges that recruit students via competitive exams and enrol only a very small number of applicants. Grande Ecole students maintain numerous social ties during their school years and after graduation. A majority of French CEOs have an elite education background, with 60.7% having been graduated from the Grandes Ecoles system, 29.32% from the Ecole Polytechnique, the leading engineering school, and 21.95% from the Ecole Nationale d'Administration (Table 2, Panel A).[8]

Among the small pool of graduates from the top Grandes Ecoles, an even smaller number enrol in the leading graduate schools that prepare them for careers in the civil service or in industry. Traditionally, the brightest graduates start their career in a ministry cabinet and join one of the prestigious civil or diplomatic service corps, commonly called the Grands Corps. Membership in one of the Grands Corps carries considerable prestige and a number of perks. While Grands Corps members (or corpsards, as they are called) are technically civil servants, it is easy for them to switch to a higher-paying job in a private company, and to switch back again to public service should they fall on hard times. A significant proportion of top government officials and CEOs are corpsards. Membership in a Grand Corps simplifies access to a peer group of powerful decision-makers in both the private sector and the government, a valuable asset in a country with a long tradition of state influence. Typically, after several years in the civil service, corpsards take jobs in the corporate sector as senior managers, often at the highest levels.

Grand Corps membership thus constitutes the second measure of the close social relationship between a CEO and board directors. The members of this very small meritocracy

[6] See Richarson (1940), McPherson et al. (2001), Cohen et al. (2007).

[7] Cohen et al. (2007) construct a proxy for whether people graduated from the same schools in the same period of time. As reported in Section 5, I find qualitatively similar results using this variable as an alternative proxy.

[8] The French *Grande Ecole* system is very exclusive and selective, including just a few business schools (HEC, ESCP, and ESSEC) and engineering schools (Ecole Polytechnique; Ecole des Mines; Ecole des Ponts et Chaussées; Ecole Centrale; Ecole Supérieure d'Electricité; and Ecole Supérieure de l'Aéronautique et de l'Espace). For the purposes of this study, I restrict the *Grande Ecole* sample to these schools.

are widely thought to enjoy exceptional power through unparalleled access to key decision-makers, who are often fellow members of a Grand Corps. Despite their small number, corpsard CEOs are strongly represented in large firms: 22.95 % of sample firms have a CEO who is a member of this group. The Inspection des Finances (or Finance Inspectorate) is among the most prestigious Grands Corps. Each year, only five to six graduates from Ecole Nationale d'Administration (ENA) are accepted into this service. Their mission is to inspect the public finances and to oversee government assets, including government stakes in firms. They thus know the business world well and enjoy close relationship with large private and public firms. It is not surprising that the Inspection des Finances corps often furnishes CEOs for the largest companies in France. The other Grand Corps that traditionally has a close relationship to industry is the Mines corps, since its members are selected from among the brightest graduates of the elite engineering schools. In this study, membership in the Inspection des Finances or Mines corps serves as the measure of the most exclusive social ties among executives. In the sample, 9.82% of firms have an Inspector of Finances as CEO, and 8.93% have a CEO who is a Mines corps member (Table 2, Panel A). This is huge representation for such a tiny group.

[Insert Table 2 about here]

### 3.2. The small world of CEOs and directors

The observation by Mills (1956, p. 294) that the corporate elite "often seem to know one another" is true in France. The same educational and professional training system that provides CEOs to large firms also fills boardrooms with its members. On an average board of 12 directors (excluding the CEO), there are 3.5 directors who graduated from an elite college (Grande Ecole), 1.25 directors from the Ecole Polytechnique, and 1.37 from ENA (Table 2, Panel B). The median board has 3 directors from a Grand Ecole (25% of board members), 1 director from Ecole Polytechnique, and 1 director from ENA. Elite directors from the Grandes Ecoles, Ecole Polytechnique, and ENA are the dominant forces on the boards of the sample firms, representing 28%, 9.48%, and 10.75% of the total number of directors, respectively. An average board includes one to two Grands Corps directors, while about three out of four boards have a director who belongs to the Inspection des Finances Corps, and approximately one in three boards has a Mines Corps director. They represent, respectively, 11.63%, 6%, and 3% of the total board members in the sample.

In this paper I propose that when the CEO and several board members belong to the same social circles and maintain common social links, directors tend to be lenient, reducing the effectiveness of board monitoring. As proxies for the social ties between a CEO and directors in a firm, I use several measures. The first is the number (and percentage) of board directors who graduated from the same elite college as the CEO. The second is the number (and percentage) of directors belonging to the same Grand Corps as the CEO. An average board has at least one director who was graduated from the same elite college as the CEO (8.5% of the number of directors), and slightly less than one in three boards (29%) has a director who belongs to the same Grand Corps as the CEO (Table 2, Panel C). Of sample firms, 57% (37.8%) have at least one graduate of an elite college (one Grand Corps member) on the board. In 15.2% of firms, there is at least one director from the same elite college and the same Grand Corps as the CEO.

The overwhelming presence of graduates from elite colleges and the Grand Corps as CEOs and directors raises questions about the capacity and the willingness of a board to decide whether to fire an underperforming CEO who belongs to the same social circles as the directors. I examine this issue in detail below.

## 4. Empirical findings

In this section, I examine whether prior performance is a determinant of CEO turnover, and the effects of social ties on the sensitivity of CEO turnover to firm performance. As a check of survival bias, I compare the results against a sub-sample of firms that appear in least four of the eight years of the sample period and only report the results if there is significant difference.

### 4.1. Corporate elite's social ties, firm performance, and CEO turnover

To evaluate whether the presence of social networks in boards impacts firm performance and board effectiveness, I systematically compare the performance and CEO turnover of firms with social networks again those without social networks in their boards. Panel A of Table 3 reports that firms with the CEO and at least one director graduated from the same elite college underperform other firms that have no elite-school graduated directors. Similarly, firms with the CEO and at least one director graduated from ENA also under-perform other firms. The difference in performance is statistically significant at the conventional levels for both cases. I obtain similar results when the CEO and board members have closer social ties (i.e., when they

belong to a more exclusive social group). Panel B of Table 3 shows that firms with the CEO and at least one director coming from the same civil service group - the Grands Corps, the Finance Inspectorate, and the Mines Corps - perform worse than other firms. The difference in performance is statistically significant. The results remain similar when I use industry-adjusted performance.

[Insert Table 3 about here]

The apparent underperformance of firms with elite and well-educated CEOs and directors is surprising. Since elite CEOs and directors are supposed to be the brightest members of a merit-based education system, they are expected to perform the best. One explanation for this might be that the positive effects of social ties are outweighed by negative entrenchment effects or by some serious incentive problems. If this is true, social networks are bad for firm performance. Another potential explanation would be that firm performance is in fact not a function of CEO and director ability, but of luck and style. I also find, as reported in the last row of Panel A and B, that CEOs are less frequently fired when the CEO and board members are socially connected. However, the difference in the CEO turnover rate is only significant when the CEO and some directors belong to exclusive groups, such as the Grands Corps or the Finance Inspectorate.

While results in Table 3 appear to confirm our main hypothesis, a note of caution must be raised. These results are from univariate tests. Thus, other variables that affect performance may be omitted. Further investigation beyond univariate analysis is needed to disentangle the effects of luck, style, and ability, perhaps by means of methods proposed by Bertrand and Mullainathan (2001) or Bertrand and Schoar (2003). In the following section I address the main question of the impact of social ties on the effectiveness of boards of directors in a multivariate framework.

### 4.2. Prior firm performance and CEO turnover

To investigate the effects of prior performance on the CEO turnover rate, I compare the average forced turnover rate between the best and worst-performing firms. Breaking the sample firms into quintiles according to prior performance (where 1 = firms with the worst performance and 5 = firms with the best performance), I compute the average rate of forced CEO turnovers for firms in each performance quintile.

[Insert Table 4 about here]

Results presented in Table 4 show a monotonic and negative relation between prior performance and CEO turnover rate. Using 2-year lagged stock performance, I find that the average CEO turnover rate is 4.1% (1.1%) per semester for the worst-performing (best-performing) firms. Thus, CEOs of the worst-performing firms are about four times more likely to be fired than those of the best-performing firms. Results from the means tests show that the differences in the average CEO turnover rate between firms in the two extreme quintiles of stock and accounting performance are statistically significant at the 1% and 5% levels, respectively. Breaking the sample in thirds according to prior performance, and using the same approach, I obtain similar (not reported) results.

### 4.3. Social ties and the sensitivity of turnover to performance

I test the paper's main hypothesis in a multivariate framework that controls for whether the CEO and directors belong to the same social circles (e.g., they attended the same elite college or belong to the same Grand Corps). Using logistic regressions and controlling for CEO characteristics, firm characteristics, and industry, I investigate whether CEO turnover is negatively and significantly related to prior performance, and whether the difference in the sensitivity of CEO turnover to prior performance is significant among firms with or without connection between the CEO and directors. For this purpose, I interact prior stock performance with dummies for whether the CEO and at least two directors graduated from ENA, and for whether the CEO and at least two (three) directors graduate from the same elite college respectively.

I use 18-month, 24-month, and 36-month lagged stock returns as proxies for prior stock performance, and one year-lagged EBIT variation as a proxy for accounting performance. For the sake of clarity of presentation, I report only results using 24-month lagged stock returns and one year lagged EBIT variation.

Panel A of Table 5 reports the results from logistic regressions that include forced CEO turnover as the dependent variable and 24-month lagged stock performance as the main independent variable. In Column 1, controlling only for CEO age, board independence measured by the proportion of insiders, and firm size, I find that CEO turnover is negatively and significantly related to prior stock performance, to the proportion of inside directors, and to CEO age. In Column 2, I include a number of control variables for factors representing firm, CEO, governance, and board characteristics, and for industry. I find that CEO turnover is

negatively and significantly associated with prior stock performance at the 5% level. As a check of robustness, I re-estimate these regressions using alternative measures of prior performance such as market-adjusted returns (using the SBF250 index), industry-adjusted returns, and dividend yield. I obtain similar, not reported, results from these checks.

The empirical findings from Table 4 and Columns 1 and 2 in Panel A of Table 5 provide evidence that forced CEO change is negatively and significantly correlated with prior stock performance. This result is similar to previous findings for U.S. firms by Coughlan and Schmidt (1985), Warner et al. (1988), Weisbach (1988), Denis and Denis (1995), Denis et al. (1997), and Huson et al. (2001), among others. Apart from prior performance, a number of factors such as CEO age and the proportion of insiders on the board also have a significant impact on CEO turnover. To test for survival bias, I compare the results against a sub-sample of time-series data for firms present in at least four of the eight years of the sample period, and I obtain similar, not reported, results. These results will be used as a base case for the further study of the impact of the corporate elite's social ties in the following section.

In Column 3 of Panel A, I interact 2-year lagged stock performance with a dummy for whether the CEO and at least two directors graduate from ENA. I then run the regression on a sample that include firms in which there is no connection between the CEO and directors and firms in which the CEO and at least two directors are graduates of ENA. I find that the coefficient of the interacted term is positive and significant at the 5% level. This indicates that the presence of social connection between the CEO and the directors through educational backgrounds at ENA, one of the very top elite colleges, significantly reduced the sensitivity of CEO turnover to performance. This result confirms our main hypothesis.

In Column 4 of Panel A, I interact 2-year lagged stock performance with a dummy for whether the CEO and at least two directors graduate from the same elite college. The coefficient of the interacted term is positive and significant at the 10% level. Similarly, in Column 5, I interact 2-year lagged stock performance with a dummy for whether the CEO and at least three directors graduate from the same elite college. The coefficient of the interacted term is positive and significant at the 5% level. Regression results in Columns 4 and 5 indicate that the presence of social connection between the CEO and the directors through educational backgrounds at elite colleges significantly reduced the sensitivity of CEO turnover to performance. This evidence appears also to confirm our main hypothesis.

[Insert Table 5 about here]

Panel B of Table 5 reports the sensitivity of CEO turnover to prior accounting performance using the same regression models as in Panel A. The main proxy for accounting performance is one-year lagged variation of EBIT. Evidence from Columns 1 and 2 shows that, as with stock performance, CEO turnover is negatively and significantly related to prior accounting performance. In Column 3, I interact one-year lagged EBIT variation with a dummy for whether the CEO and at least two directors graduate from ENA. The coefficient on the accounting performance variable remains negative and significant. The coefficient of the interacted terms is positive, but insignificant at conventional levels. In Column 4, I interact one-year lagged EBIT variation with a dummy for whether the CEO and at least two directors graduate from the same elite college. I find that a negative and significant coefficient on the accounting performance variable. Meanwhile, the coefficient of the interacted term is positive and significant at the 5% level. This indicates that social ties between the CEO and directors in this case significantly reduce the sensitivity of CEO turnover to prior accounting performance. In Column 5, I repeat the same regression with a dummy for whether the CEO and at least three directors graduate from the same elite college. I obtain a positive and significant coefficient at the 10% level on the interacted term.

The overall results from Table 5 indicate that when the CEO and some directors belong to the same social circles, the performance–CEO turnover sensitivity is significantly reduced. CEOs with close social links with directors are less likely to be ousted when firms perform poorly than other CEOs with no social ties. The effectiveness of board monitoring is therefore significantly reduced. Results from Table 5 confirm the paper's main hypothesis.

### 4.4. Social ties and CEO re-employment after turnover

If it is the case that a CEO's social circles protect him even after a forced departure (assisting him, for example, in finding re-employment in another position of similar status and compensation), this will mitigate the impact of the board's action in removing him. A forced CEO departure, which is ex-post a result of effective board monitoring might then turn out to be less effective ex-ante. Measuring the quality of CEO re-employment after a forced departure allows us to evaluate the effectiveness and impact of CEO social ties on CEOs' ex-ante incentives to perform well. I thus collect information on CEO employment after their departure. I define a CEO's new employment after a turnover as a better job if the new firm has sales at

least equal to those of the former firm, then compare the probability of new job's finding between socially connected CEOs and non-connected CEOs.[9]

From the information collected, I find that after a forced departure, it takes an average CEO 56.81 days to find a new employment (94.5 days in case of a better job and 51.43 days in cases of worse job). 45% of ousted CEOs never find a new job and only 55% of them find a new employment. After a voluntary turnover, 52% of CEOs retire for good. Among the remaining 48% of CEOs, it takes them on average 15.83 days to find a new employment (18 days in case of a better job and 13.53 days in cases of worse job). Many of the voluntary departures are due to promotions when a CEO accepts an offer to become CEO of a larger company immediately after resigning from their former employment.

Column 1 of Table 6 reports that after a forced departure, only 8.33% of non-connected CEOs find a better employment while 91.67% find worse employment. Getting re-employed is likely to be easier for CEOs with closer social ties. Column 2 of Table 6 reports, for example, that 22.39% of connected CEOs to at least one director from the same elite college will find a better job after being fired, while 32.89% of them will find a better job after voluntary turnover. The difference between connected CEOs and non-connected CEOs in finding better employment after forced departure is statistically significant at the 1% level as highlighted in Column 2.

[Insert Table 6 about here]

Columns 3, 4, and 5 present similar results when the CEO and directors are connected through the Civil Service. For example, in firms with a CEO from the Mines Corps and at least one director from this Civil Service backgrounds, 22.40% of CEOs find better jobs after being fired, while the percentages of CEOs from the Grands Corps and Finance Inspectorate finding better employment are 20.31% and 20.31%, respectively. The difference in the likelihood of finding equivalent or better employment after a forced turnover is statistically significant. I find similar results with voluntary CEO turnovers.

[9] Alternative measures of the quality of a CEO's new job after a turnover include the total compensation an ousted CEO obtains from a new employment, and/or the ratio of the total CEO compensation from the new job to that of the former employment. Because French law did not require public firms to disclose top executives' compensation during the sample's period, it is not possible to measure the quality of the CEO's new job based on compensation for the sample period.

It is noted that Table 6 relies on social ties between the CEO and directors in a company as a proxy for the strength of a CEO's network. The reason for doing so is that when a CEO is connected to directors in the same board, he is also connected to the outside corporate world through the same network of schools and/or the Civil Service. When I use just the education and professional backgrounds of these CEOs as proxy for social ties without taking board ties into account, I find qualitatively similar results.

On the rationale of why a CEO who is connected to directors has more ease in finding a new and better employment after being fired, while we do not provide direct tests for this question, several potential explanations are possible. Our main measure of social ties is whether a CEO belongs to a strong social network (i.e. elite colleges) in the first place, and whether this CEO shares the same network with one or more directors in the board. Thus, the first potential explanation is that a connected CEO in our sample benefits from a general effect of being a member of a strong network (elite college), in a way similar to Kramarz and Thesmar (2006), who find that a board dominated by members of a network in France tends to favour the recruitment of new directors from the same network. Secondly, a CEO's connection to several board members might be a proxy for his or her broader connection to boarder networks (a friend of a friend is a friend): if the CEO is already a member of an elite network, already enjoys common social ties with board members, he might have more connections than we could have predicted. This broader network might be helpful in assisting him to find new employment. Hence, even if board members directly connected to an ousted CEO do not help him directly, the network effect is still helpful.

Table 6 provides further evidence that the small world of CEOs and directors does protect elite CEOs, not only before, but also after CEO turnover. The overall impact of the small world of CEOs and directors on firm governance thus is two-fold. When the CEO and board members belong to the same networks, the former appears to gain not only ex-post protection, but also ex-ante protection. He is less likely to be ousted for poor performance and more likely to find a new and better job after being dismissed. Although other factors in the labour market for top executives might also impact post-turnover employment perspectives of CEOs, our results show that at least social networks play some role.[10]

[10] A note of caution arises here. My re-employment analysis cannot distinguish a general network effect from a specific network effect on the new boards of directors as fired CEOs would be more likely to get a good job in a firm where they are already networked with the directors. More detailed analysis under a multivariate framework based on labour economics literature will be useful. However, as reported, the types of social networks in this paper

## 5. Interpretation of the results and robustness checks

### 5.1. Value of networks and entrenchment of networks

This paper studies whether social networks between the CEO and board members impacts the effectiveness of boards of directors. CEOs and directors from the same network might tend to appoint each other onto the boards. The focus of this paper is not to study the potentially endogenous relationship between social networks and appointment decisions, but to show the impact of the observable social relationship between CEOs and directors on firm governance.

The paper hypothesizes that the overall net effect of social networks is negative and hence the reduced sensitivity of CEO turnover to performance. However, one might argue that, first, having connections is both a signal of quality and is valuable in and of itself. Second, under the elite education system in France, the best people might simply end up being members of the corporate networks. Elite CEOs might simply be the best, and thus better treated after poor performance than another non-connected CEO. This possibility is first addressed in Table 3, and secondly in Table 5.

Panels A and B of Table 3 report that firms in which the elite CEO is connected to directors significantly underperform other firms. Thus, elite and connected CEOs appear not to outperform other CEOs. Furthermore, in Columns 3, 4, and 5 of Table 5, by creating dummies for whether there is a social connection between the CEO and directors, I have indeed compared the sensitivity of CEO turnover to performance between a sub-sample of firms in which the connection between the CEO and directors exists and a sub-sample of firm where this connection is absent (i.e. when only the CEO has the elite status or when only directors have the status.) Results from Table 5 highlight the impact of social ties by showing that the sensitivity of CEO turnover to performance is significantly reduced when the CEOs and directors are connected.

### 5.2. Alternative explanations of the decreased sensitivity of CEO turnover to performance and potential endogeneity

---

are very present across all large firms in France and in all industries. The paper's results are thus consistent through many network measures based on the exclusivity of the ties.

Another valid argument is that if the CEO and some directors of the same board belong to the same social network, the board might have better information and internal signals on the quality of the CEO. These would be reasons why boards would retain a connected CEO when they would have fired an unconnected one. Moreover, retaining a CEO who is and insider in powerful networks might be valuable to the firm. Finding and replacing such a CEO is a difficult, risky, and costly task. The decision to fire an elite CEO might thus be dependent on assumed replacement options. However, the paper's overall results might not be affected as elite directors may reduce the need for an elite CEO.

I further address this issue of CEO quality by controlling for some factors that represent CEO quality. I collect information that might represent the quality of a CEO and uses them as control variable in regressions. Following Milbourn (2003), our main proxies for a CEO quality are CEO tenure, a firm's relative performance, and outside CEO.

My first proxy for quality is CEO tenure, defined as the number of years the executive has been CEO at this firm. The rationale is that the longer is the CEO's tenure, the more positive are the board of directors' assessments of his ability, as this CEO has survived previous retention/dismissal decisions. The board's full information set is unobservable to the market, but retention decisions are. In the paper's sample, average and median CEO tenures are 7.7 and 5 years respectively (which are lower than Milbourn (2003) figures of 8.50 and 6.46 years, respectively for U.S. CEOs). This proxy is of course not perfect as one can argue that CEO tenure might also be a proxy for entrenchment in firms with bad governance.

My second proxy is whether the CEO was appointed from within or outside of the firm. Milbourn (2003) posits that outside appointments are associated with the CEO having a higher reputation and ability because the perceived ability level necessary to become CEO as an outsider over an inside candidate with better knowledge of the firm's inner workings is greater. Similar to Milbourn (2003), I construct an indicator variable, denoted outsider, which is equal to zero if the CEO joined the company at a date prior to becoming CEO, and equal to one if the date the CEO joined the company is the same as the date at which he became CEO. 28.5% (71.5%) of the sample's CEOs are outside (inside) appointments.

The last proxy for CEO reputation is the industry-adjusted stock price performance while the CEO has been at the helm of the firm. I construct a dummy for whether the CEO outperforms his firm's industry for the last 18 months, 24 months and 36 months respectively. We calculate a relative performance measure within the industry in which the firm operates

based on its two-digit SIC code. This approach accounts for the fact that shareholders would not necessarily devalue a CEO's quality based on poor performance if the entire industry exhibited such performance.

I have hand-collected all the data necessary for our proxies for CEO quality for all firms in our sample from the Guide since 1994 to 2001. I supply missing information from Who's Who in France, as well as from search in Nexis-Lexis, and Factiva databases if necessary.

I re-run regressions as in Table 5 with the above-mentioned controls for the quality of a CEO and report result in Table 7. Columns 1, 2, and 3 show consistent and similar results as compared to Table 5. After controlling for the quality of a CEO, it appears that the sensitivity of CEO turnover to performance remains significantly reduced by the presence of social ties between the CEO and directors: the coefficients of interacted terms between prior performance and social networks are positive and statistically significant at conventional levels, and fairly comparable in terms of magnitude with regressions in Table 5.

[Insert Table 7 about here]

Regression results also show that CEO tenure is negatively and significantly related to CEO turnover. This is the expected impact of CEO quality: good CEOs are less subject to forced turnover. Our results on the negative and significant relationship between CEO tenure and turnover appear not to support the possibility that elite CEOs might be called upon to fix distressed firms and stay there even when firm performance is poor. CEOs with short tenure are subject to a higher (not a lower) turnover probability.

Good CEOs who outperformed the industry can expect to be less likely to be ousted. We indeed obtain positive (but not statistically significant) regression coefficients of the dummy on whether the CEO outperforms the industry. Moreover, we do not find significant impact of the outside CEO dummy on CEO turnover. The positive coefficients are the contrary of what we expected. In summary, our main results are not affected when controlling for CEO quality.

### 5.3. Sample selection and survival bias

The varying number of firms selected each year in the sample raises the question of survival bias. I thus systematically check results on a sub-sample of firms that appear in at least four of the eight years of the sample period. I do find qualitatively similar results.

### 5.4. Alternative variables and refined network measurement

A subjective choice of control variables can generate errors. The use of alternative variables helps avoiding this risk. Firm size has been measured by log of assets. I check results using the log of total sales, log of market value, and log of prior-year sales. As performance variables, I use industry-adjusted and market-adjusted stock performance for one, two, and three years before CEO turnover. I re-run regressions using those alternative variables and find no significant difference in results.

I also refine my measurement of networks. In the same line as in Cohen et al. (2007), I construct a proxy for whether people not only graduated from the same schools, but in the same period of time. Furthermore, as people in the same network of the same age are more likely to overlap in school, I also use a proxy for whether the CEO and directors in a board are close in age as alternative measure of potential social ties. Qualitatively, I find the same results as with my proposed measurement of networks. The similar results might be explained by the fact that the size of the small world of top executives in France is smaller that that of the U.S. (for example, only about five people are accepted into the Finance Inspectorate a year). This makes the interaction between people from the same elite college or Grands Corps more likely.

### 5.5. Distribution of elite top executives among industries

Elite CEOs and directors might choose to work only in certain industries and not others. Directors of a firm in a challenging environment might be more inclined to turn to their elite peer network to recruit a (high quality) CEO who can handle such an environment. Thus, the results from the paper might be driven by a cluster of elite executives working in a limited number of industries. To account for this possibility, I systematically control for industries using two-digit industry codes in empirical tests.

I also check the distribution of elite CEOs and directors, and investigate the timing of CEO arrivals. However, I find no significant propensity of elite CEOs and directors to work in particular industries over time. Instead, these elite executives can be found in almost every industry, and in firms with no government ownership as well as in firms with government ownership.

## 6. Conclusion

This paper empirically explores the impact of social ties between CEOs and directors on the effectiveness of boards of directors. The central hypothesis of the paper is that close social links between CEOs and directors enable CEOs to be treated with leniency when firm performance is poor as the members of a social network might not want to be tough with their peers for fear of reprisal or loss of personal and network reputation. Constructing a set of measures of social ties between a CEO and directors within a board of directors, I carry out my empirical investigation on a sample of the largest French corporations from 1994 to 2001.

The empirical analysis provides evidence that social ties between CEOs and directors influence firm governance. I find that when the CEO and a number of board members belong to the same social circles, the CEO is less likely to be ousted for poor performance and more likely to find new and good employment after a forced departure. The result appears robust to different measures of performance and networks, and are not due to CEO ability or connected boards' superior information. This study thus contributes to the literature by providing evidence that social ties among top executives are factors that significantly undermine the effectiveness of the board of directors, a central device in any corporate governance mechanism.

**REFERENCES**


Allen, Franklin, Ana Babus, 2008. Networks in finance. Working paper.

Adams, R., Ferreira, D., 2007. A theory of friendly boards. Journal of Finance 62(1), 217-250.

Barber, B., Palmer, D., 2001. Challengers, elites, and owning families: a social class theory of corporate acquisitions in the 1960s. Administrative Science Quarterly 46, 87-120.

Barber, B., Palmer, D., Wallace, J. 1995. Determinants of conglomerate and predatory acquisitions: evidence from the 1960s. Journal of Corporate Finance 1, 283-318.

Barber, B., Palmer, D., Zhou, X., Soysal, Y., 1995. The friendly and predatory acquisition of large U.S. corporations in the 1960s: the other contested terrain. American Sociological Review 60, 469-499.

Barnea A. and Guedj I., 2007. But mom, all other kids have one! – CEO Compensation and director networks. Working paper.

Bauer, M., Bertin-Mourot, B., 1997. Radiographie des grands patrons francais : les conditions d'acces au pouvoir 1985-1994. Editions l'Harmattan.

Bertrand, M., Mullainathan, S., 2001. Are CEOs rewarded for luck? The ones without principals are. Quarterly Journal of Economics 116, 901-932.

Bertrand, M., Schoar, A., 2003. Managing with style: the effect of managers on firm policies. Quarterly Journal of Economics 118, 1169-1208.

Bonacich, P., 1987. Power and centrality: a family of measure. American Journal of Sociology 92, 1170-1182.

Brandeis, L.D., 1914. Other people's money: And how the bankers use it. Frederic A. Strokes Publishing, New York.

Cohen Lauren, Christopher Malloy, and Andrea Frazzini, 2007. The small world of investing: board connections and mutual funds returns. Journal of Political Economy 116, 951-979.

Cohen Lauren, Christopher Malloy, and Andrea Frazzini, 2010. Sell side school ties. Journal of Finance 65 (4), 1409-1437.

Coughlan, A., Schmidt, R., 1985. Executive compensation, management turnover, and firm performance: an empirical investigation. Journal of Accounting and Economics 7, 43-66.

Davis, G., Greve, H., 1997. Corporate elite networks and governance changes in the 1980s. American Journal of Sociology 103, 1-37.

Davis, G., Yoo, M., Baker, W., 2003. The small world of the American corporate elite 1982–2001. Strategic Organization 1, 301-326.

Denis, D., Denis, D., 1995. Performance changes following top management dismissal. Journal of Finance 50, 1029-1058.

Denis, D., Denis, D., Sarin, A., 1997. Ownership structure and top executive turnover. Journal of Financial Economics 45, 193-221.

Denis, D., McConnell, J., 2003. International corporate governance. Working paper.

Hallock, K., 1997. Reciprocally interlocking boards of directors and executive compensation. Journal of Financial and Quantitative Analysis 32, 331-344.

Hermalin, B., Weisbach, M., 2003. Boards of directors as an endogenously determined institution: a survey of economic literature. Economic Policy Review (April), 6-26.

Hochberg, Yael, Alexander Ljungqvist, and Yang Lu, 2007. Whom you know matters:venture capital networks and investment performance. Journal of Finance 62, 251-301.

Networking as a Barrier to Entry and the Competitive Supply of Venture Capital,(with Alexander Ljungqvist and Yang Lu), 2010. Journal of Finance 65, 829-859.

Huson, M., Parrino, R., Starks, L., 2001. Internal monitoring mechanisms and CEO turnovers: a long-term perspective. Journal of Finance 56, 2265-2297.

Jenter, Dirk and Fadi Kanaan (2010), CEO Turnover and Relative Performance Evaluation, Forthcoming Journal of Finance.

Kramarz, F., Thesmar, D., 2006. Social networks in the boardroom. IZA Discussion Paper No. 1940.

Kuhnen, Camelia M., 2009. Business networks, corporate governance and contracting in the mutual fund industry. Journal of Finance 64(5), 2185-2220.

Larcker D., Richarson S., Seary A., and Tuna I., 2005. Back door link between directors and executive compensation. Working paper.

McPherson, M., L. Smith-Lovin, and J. Cook, 2001. Birds of a feather: homophily in social networks. Annual Review of Sociology, 37, 415-444.

Milbourn, Todd (2003), CEO Reputation and Stock-Based Compensation, Journal of Financial Economics 68-2, 233-262.

Milgram, S., 1967. The small world problem. Psychology Today 2, 7-60.

Mills, C., 1956. The Power Elite. Oxford, New York.

Mizruchi M., 1982. The American Corporate Network, 1904-1974. Beverly Hill Sage Publications.

Parrino, R., 1997. CEO turnover and outside succession: a cross-sectional analysis. Journal of Financial Economics 46, 165-197.

Pfeffer, J., Salancik, G., 2003. The External Control of Organizations: A Resource Dependence Perspective. Stanford University Press, Palo Alto, CA.

Richarson, H., 1940. Comminity of values as a factor in friendships of college and adult women. Journal of Social Psychology 11, 303-312.

Simon, C., Warner, J., 1992. Matchmaker, matchmaker: the effect of old boy networks on job match quality, earnings, and tenure. Journal of Labor Economics 10, 306-330.

Schmidt, Breno, 2008, Costs and benefits of "friendly" boards during mergers and acquisitions, Working Paper, University of Southern California.

Soref, M., 1989. Review of The Structure of Power in America: The Corporate Elite as a Ruling Class. Contemporary Sociology 18, 181-182.

Useem, M., 1984. The Inner Circle. Oxford University Press, Basic Books, New York.

Warner, J., Watts, R., Wruck, K., 1988. Stock prices and top management changes. Journal of Financial Economics 20, 461-492.

Wasserman, S., Fraust, K., 1997. Social Networks Analysis. Cambridge University Press.

Watts, D., 1999. Small Worlds. Princeton University Press.

Weisbach, M., 1988. Outside directors and CEO turnover. Journal of Financial Economics 20, 431-460.

Yermack, D., 1996. Higher market valuation of companies with a small board of directors. Journal of Financial Economics 40, 185-211.

**Table 1**
**Descriptive Statistics**

The sample includes 2,536 firm-semester observations of the largest publicly-traded French firms from 1994 to 2001 compiled by *Le Guide des Etats Majors*. I collect four groups of data relating to firm and board characteristics, ownership structure, detailed information on directors, and CEO biographic data. Ownership variables include block holdings, institutional shareholdings, and state ownership. State ownership is the percentage of shares held by the French government or through state-controlled holding companies. Board features include size, legal form, and the percentage of board insiders. CEO personal details include dummies for CEO-founder, elite-college graduate (*Grande Ecole*) CEO, prestigious civil service corps (*Grand Corps*) CEO; number of CEO cross-directorships; CEO age, and CEO turnover date. CEO turnover and performance data, CEO biographic information, and ownership structure data are obtained from *Le Guide des Etat -Majors* (Agefi Editions), Datastream, Lexis-Nexis, and Dafsaliens.

| Variables | Obs. | Mean | Std. Dev. | Min. | Max. | Median |
|---|---|---|---|---|---|---|
| Firms | | | | | | |
| Total assets (in € millions) | 2,536 | 22,300 | 83,300 | 51.8 | 87,500 | 2,885.7 |
| Market value (in € millions) | 2,536 | 5,523.57 | 11,420.85 | 0.69 | 150,003.6 | 1,673.5 |
| Total sales (in € millions) | 2,536 | 6,067.10 | 9,646.20 | 27.8 | 115,000 | 1,883.8 |
| Board | | | | | | |
| Board size | 2,536 | 11.42 | 4.14 | 1 | 25 | 12 |
| One-tier board dummy | 2,536 | 0.8 | | 0 | 1 | |
| Number of employees on board (excluding the CEO) | 2,536 | 0.66 | 1.21 | 0 | 15 | |
| Number of employees in board (including the CEO) | 2,536 | 1.66 | 1.64 | 0 | 11 | |
| CEOs | | | | | | |
| CEO turnover rate | 2,536 | 0.06 | 0.24 | 0 | 1 | |
| Number of CEO cross-directorships | 2,536 | 0.84 | 1.7 | 0 | 11 | |
| Number of CEO directorships | 2,536 | 1.32 | 2.0 | 0 | 11 | |
| CEO-founder dummy | 2,536 | 0.21 | 0.41 | 0 | 3 | |
| Elite-college graduate (*Grande Ecole*) CEO dummy | 2,536 | 0.6 | | 0 | 1 | |
| ENA graduate CEO dummy | 2,536 | 0.22 | 0.41 | 0 | 1 | |
| Civil service corps (*Grand Corps*) CEO dummy | 2,536 | 0.23 | | 0 | 1 | |
| Inspection of Finances CEO dummy | 2,536 | 0.098 | | 0 | 1 | |
| CEO age | 2,536 | 55.36 | 7 | 36 | 79 | |
| CEO ownership (%) | 1,505 | 6.36 | 15.9 | 0 | 81.49 | |
| Ownership Structure | | | | | | |
| Largest shareholder (%) | 2,222 | 46.98 | 28.84 | 0.99 | 99.01 | 45.19 |
| State ownership (%) | 2,389 | 5.5 | 16.75 | 0 | 99.7 | |
| Largest three shareholders (%) | 745 | 47.35 | 23.98 | 5.6 | 99.97 | 47.35 |
| Largest institutional shareholder (%) | 924 | 16.34 | 19.9 | 0 | 99.0 | 8.35 |
| Largest three institutional shareholders (%) | 280 | 30.25 | 21.64 | 1.8 | 92.21 | 30.25 |

**Table 2**

**Social Ties between CEOs and Directors**

This table reports detailed social ties of CEOs and directors. Measures of social ties between CEOs and directors are based on elite college (*Grande Ecole)* education and prestigious Civil Service corps (*Grand Corps*) background. The French *Grande Ecole* system is very exclusive and selective, including a few business schools (HEC, ESCP and ESSEC) and a few engineering schools (Ecole Polytechnique, Ecole des Mines, Ecole des Ponts, Ecole Centrale, Ecole Supérieure d'Electricité). The *Grande Ecole* sample is restricted to these top schools. In some cases, a *Grande Ecole*, an undergraduate school by definition, is also a graduate school. The most well-known graduate *Grandes Ecoles* are the *Ecole Nationale d'Administration (ENA)*, *Ecole des Mines (Mines) and Ecole des Ponts et Chaussées (Ponts).* To take into account the relationship between CEOs and directors, I set up dummies for CEO education and professional background. The Civil Service corps (*Grands Corps*) CEOs are from the following corps: *Conseil d'Etat (*Supreme Administrative Court*), Inspection des Finances (*Inspection of Public Finance*), Cour des Comptes (*Audit of Public Finance*), Ponts et Chaussées (*Civil Engineering*)*, and *Mines (*Engineering and Industrial Policies). The sample includes 2,536 firm-semesters of the largest publicly traded French companies from 1994 to 2001 compiled by *Le Guide des Etats Majors*.

Panel A: Elite CEOs

| | Observations | Mean | Std. dev. | Min. | Max. | Cross-directorships/ Total directorships | Ratio of cross-directorships to total number of CEOs |
|---|---|---|---|---|---|---|---|
| Elite college (*Grande Ecole*) | | | | | | | |
| Elite-college graduate CEO dummy | 2,536 | 60.7% | 48.8 | 0 | 1 | 77.6% | 1.28 |
| *Ecole Polytechnique* graduate CEO dummy | 2,536 | 29.32% | 45.5% | 0 | 1 | | |
| *Ecole Nationale d'Administration* (ENA) graduate CEO dummy | 2,536 | 21.95% | 41.4% | 0 | 1 | | |
| Civil Service Corps (*Grands Corps*) | | | | | | | |
| Civil Service Corps CEOs | 2,536 | 22.95% | 42.06% | 0 | 1 | 35.51% | 1.55 |
| Inspector of Finance (*Inspecteur des Finances*) CEOs | 2,536 | 9.82% | 29.8% | 0 | 1 | 24.1% | 2.45 |
| *Mines* corps CEOs | 2,536 | 10.3% | 30.41% | 0 | 1 | 30.4% | |
| MBA CEOs | 2,536 | 8.93% | 28.52% | 0 | 1 | | |
| All Sample | 2,536 | | | | | | 0.84 |

**Table 2 —** *Continued*

Panel B: Corporate Elite and Board Composition

| | Observations | Mean | Std. dev. | Min. | Max. | Median |
|---|---|---|---|---|---|---|
| Elite Colleges (*Grande Ecole*) | | | | | | |
| Number of elite-college graduate directors on the board, excluding the CEO | 2,536 | 3.5 | 1.44 | 0 | 12 | 3 |
| Percentage of elite-college graduate directors on the board, excluding the CEO | 2,536 | 28% | 18.22% | 0 | 91.7% | 25% |
| Number of *Ecole Polytechnique* graduate directors on the board, excluding the CEO | 2,536 | 1.25 | 1.36 | 0 | 7 | 1 |
| Percentage of *Ecole Polytechnique* graduate directors on the board, excluding the CEO | 2,536 | 9.48% | 10.2% | 0 | 0.75% | 7.7% |
| Number of *Ecole Nationale d'Administration* (*ENA*) directors, excluding the CEO | 2,536 | 1.37 | 1.44 | 0 | 8 | 1 |
| Percentage of *Ecole Nationale d'Administration* (*ENA*) directors excluding the CEO | 2,536 | 10.75% | 11% | 0 | 66.7% | 8.3% |
| Civil Service Corps (*Grand Corps*) | | | | | | |
| Number of Civil Service Corps directors on the board, excluding the CEO | 2,536 | 1.5 | 1.65 | 0 | 8 | 1 |
| Percentage of Civil Service Corps directors on the board, excluding the CEO | 2,536 | 11.63% | 12.24% | 0 | 71.4 | 8.3% |
| Number of Inspector of Finances directors on the board, excluding the CEO | 2,536 | 0.73 | 1.04 | 0 | 7 | |
| Percentage of Inspector of Finances directors on the board, excluding the CEO | 1,933 | 5.6% | 8% | 0 | 50% | |
| Number of *Mines* corps directors on the board, excluding the CEO | 2,536 | 0.37 | 0.66 | 0 | 4 | |
| Percentage of *Mines* corps directors on the board, excluding the CEO | 2,536 | 3% | 5.5% | 0 | 40% | |

Panel C: Social Ties between CEOs and Directors

| | Observations | Mean | Std. dev. | Min. | Max. | Median |
|---|---|---|---|---|---|---|
| Elite Colleges (*Grande Ecole)* | | | | | | |
| Number of board members graduated from the same elite college as the CEO | 2,536 | 1.14 | 1.82 | 0 | 10 | |
| Percentage of board members graduated from the same elite college as the CEO | 2,536 | 8,5% | 13.36% | 0 | 83.33% | |
| Dummy for presence of at least one board member from the same elite college as the CEO | 2,536 | 57% | 49.5% | 0 | 1 | |
| Civil Service Corps (*Grand Corps)* | | | | | | |
| Number of board members from the same Civil Service Corps as the CEO | 2,536 | 0.29 | 0.81 | 0 | 7 | |
| Percentage of board members from the same Civil Service Corps as the CEO | 2,536 | 2% | 5.7% | 0 | 41.2% | |
| Dummy for presence of at least one board member from the same Civil Service Corps as the CEO | 2,536 | 37.8% | 48.5% | 0 | 1 | |
| Dummy for membership of CEO and at least one board member in the *Mines* corps | 2,536 | 5.4% | 22.65% | 0 | 1 | |
| Dummy for membership of CEO and at least one board member in the Inspection of Finances Corps | 2,536 | 7.34% | 26.1% | 0 | 1 | |
| Dummy for at least one director from the same *Grande Ecole* and *Grand Corps* as the CEO | 2,536 | 15.2% | 35.9% | 0 | 1 | |

**Table 3**

**Social Ties of CEOs and Directors, Firm Performance, and CEO Turnover**

This table reports the relationship between social ties, firm performance, and CEO turnover probability. CEO and director social ties are measured in terms of membership in the same social networks: Elite-college (*Grande Ecole)* education (the broadest measure of small world); membership in the Civil Service Corps (*Grand Corps),* a closer measure; and/or membership in the *Inspection des Finances* or *Mines* corps (the closest measure). The *Grand Corps* comprises the following individual corps: *Conseil d'Etat* (Supreme Administrative Court)*, Inspection des Finances* (Inspection of Public Finance)*, Cour des Comptes* (Audit of Public Finance)*, Ponts et Chaussées* (Civil Engineering)*, Mines* (Engineering and Industrial Policies). Among social ties arising from elite colleges, the paper focuses on the *Ecole National d'Administration* (ENA), commonly considered the most selective college in France. Among *Grand Corps* CEOs, the focus is on social ties arising from the *Inspection des Finances* and *Mines,* the two most selective civil service corps. Panels A and B report the average of firm performance and CEO turnover rate relative to whether the CEO and board directors belong to the same social networks, and results from means tests for these sub-samples of firms. *T*-values are in parentheses, with one, two, or three stars if significant at the 10%, 5%, or 1% level, respectively. Performance is reported in percentages.

Panel A: CEO and Directors from the Same Elite Colleges (*Grandes Ecoles*), Firm Performance, and CEO Turnover

| | No *Grande Ecole* director on the board (1) | CEO and at least one director from the same *Grande Ecole* (2) | Means Test (1)=(2) | CEO and at least one director from ENA (3) | Means Test (1)=(3) |
|---|---|---|---|---|---|
| 18-month lagged stock performance (%) | 33.1 | 29.41 | *(t = −2.58)*** | 29.4 | *(t = −2.58)**** |
| 24-month lagged stock performance (%) | 43.4 | 40.49 | *(t = −1.8)** | 40.33 | *(t = −1.9)** |
| Forced CEO turnover rate (%) | 3.3 | 2.8 | *(t = −1.22)* | 2.9 | *(t = −1.3)* |

Panel B: CEO and Directors from the Same Civil Service Corps (*Grands Corps*), Firm Performance, and CEO Turnover

| | No *Grande Ecole* director on the board (1) | CEO and at least one director from the same *Grand Corps* (4) | Means Test (1) = (4) | CEO and at least one director from the *Inspection des Finances* (5) | Means Test (1) = (5) | CEO and at least one director from *Mines Corps* (6) | Means Test (1) = (6) |
|---|---|---|---|---|---|---|---|
| 18-month lagged stock performance (%) | 33.1 | 29.44 | *(t=−2.57)**** | 28.98 | *(−2.96)**** | 29.6 | *(−2.41)*** |
| 24-month lagged stock performance (%) | 43.4 | 40.6 | *(t = −1.74) ** | 40.3 | *(−1.93)** | 40.29 | *(−1.93)** |
| Forced CEO turnover rate (%) | 3.3 | 2.71 | *(t = −1.81)** | 2.72 | *(−1.77)** | 2.88 | *(−1.25)* |

**Table 4**

**Prior Firm Performance and Forced CEO Turnover Rate**

I compare the average forced CEO turnover rate relative to prior firm performance. The sample consists of 2,536 firm-semesters of the largest publicly traded French companies from 1994 to 2001, compiled by *Le Guide des Etats Majors*. Forced CEO turnovers are defined a la Parrino (1997), and include cases that are reported as fired, forced out, or retires, or resigns due to policy difference.. I break prior firm performance into quintiles (in which 1 = firms with the worst performance and 5 = firms with the best performance) and report the corresponding average rate of forced CEO turnover. I use several performance benchmarks: 18-, 24-, and 36-month lagged stock performance, and one-year lagged EBIT/assets variation. Breaking the sample into thirds, I obtain similar results (not reported). The last column reports results of means tests that compare the average CEO turnover rate of the worst- and best-performing firms. *T*-values are in parentheses and are marked with one, two, or three stars if significant at the 10%, 5%, or 1% level, respectively. CEO turnover and performance data, biographic information, and ownership structure data are obtained from *Le Guide des Etats Majors,* Datastream, Lexis-Nexis, and Dafsaliens.

| | Average CEO turnover rate (performance quintiles) | | | | | |
|---|---|---|---|---|---|---|
| Prior firm performance | 1st quintile [Worst performance] | 2nd quintile | 3rd quintile | 4th quintile | 5th quintile [Best performance] | Means Test (1) = (5) |
| 18-month lagged stock performance | 4.2% | 3.6% | 2.7% | 2.0% | 1.3% | (2.64)*** |
| 24-month lagged stock performance | 4.1% | 4.1% | 3.2% | 1.6% | 1.1% | (2.75)*** |
| 36-month lagged stock performance | 4.4% | 4.4% | 3.2% | 1.6% | 0.5% | (3.78)*** |
| One year-lagged EBIT/asset variation | 5% | 2,4% | 2,1% | 1,4% | 2,1% | (2.1)** |

**Table 5**

**Prior Firm Performance and Forced CEO Turnover Probability**

I estimate the probability of forced CEO turnovers relative to prior firm performance using logistic regressions. The sample includes 2,536 firm-semesters of the largest publicly-traded companies in France from 1994 to 2001 compiled by *Le Guide des Etats Majors*. Forced CEO turnovers are defined a la Parrino (1997), including cases that are reported as fired, forced out, or retires or resigns due to policy differences, and excluding cases of CEO turnovers that can be interpreted as promotions. For all models, the dependent variable is the forced CEO turnover dummy, which is equal to one if there is a forced CEO turnover and equal to zero if there is no CEO turnover or a voluntary one. The main independent variables are 24-month lagged market-adjusted in Panel A and 12-month lagged accounting performance in Panel B for the semesters prior to CEO turnovers, and their interactions with dummies for whether the CEO and at least two and three directors graduate from ENA and an elite college, respectively. I include four groups of control variables, relating to CEO characteristics (dummies for CEO-founder and CEO age), firm ownership structure (percentage of shares held by the largest shareholder), board features (size, percentage of insiders, and dummy for two-tier board), and firm characteristics (size and industry dummies). I report estimated coefficients, starred with one, two, or three stars if significant at the 10%, 5%, or 1% level, respectively. Standard errors are in parentheses. CEO turnover and performance data, biographic information, and ownership structure data are obtained from *Le Guide des Etats Majors* (Agefi Editions), Datastream, Lexis-Nexis, and Dafsaliens.

Panel A: Stock Performance

| Independent Variables | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| 24-month lagged stock performance (PER2Y) | −0.0092 ** | -0.0085 ** | -0.0155*** | -0.0135 * | -0.0158 ** |
| | (0.0039) | (0.0042) | (0.0058) | (0.0072) | (0.0071) |
| Dummy for firms with the CEO and at least two director graduated from ENA (ENA2) | | | -0.3691 | | |
| | | | (0.7456) | | |
| Interacted PER2Y*ENA2 | | | 0.0217 ** | | |
| | | | (0.0090) | | |
| Dummy for firms with the CEO and at least two directors from the same elite college (EC2) | | | | -0.2162 | |
| | | | | (0.5957) | |
| Interacted PER2Y*EC2 | | | | 0.0150 * | |
| | | | | (0.0093) | |
| Dummy for firms with the CEO and at least three directors from the same elite college (EC3) | | | | | -0.9445 |
| | | | | | (0.7281) |
| Interacted PER2Y*EC3 | | | | | 0.0238** |
| | | | | | (0.0095) |
| CEO age | −0.0751 *** | −0.0746 ** | -0.0718 * | -0.0990 ** | -0.1077 ** |
| | (0.0282) | (0.039) | (0.0402) | (0.0446) | (0.0460) |
| CEO-founder dummy | | −0.5912 | -0.3289 | | -0.3116 |
| | | (0.7449) | (0.7766) | | (0.8438) |
| Largest shareholder (%) | | 0.0005 | -0.0007 | 0.0055 | 0.0042 |
| | | (0.0096) | (0.0098) | (0.0109) | (0.0114) |
| Two-tier board dummy | | 0.0052 | -0.0193 | -0.1204 | -0.1668 |
| | | (0.5807) | (0.5838) | (0.6054) | (0.6290) |
| Board size | | .00658 | 0.0622 | 0.0939 | 0.0773 |
| | | (0.0771) | (0.0784) | (0.0932) | (0.0933) |
| Board insiders (%) | −6.1405* | −4.4386 | -4.2337 | -3.4549 | -2.5363 |
| | (3.4412) | (4.3652) | (4.3350) | (4.1916) | (4.220) |
| Number of CEO cross-directorship | | 0.0707 | 0.0388 | -0.0347 | -0.0156 |
| | | (0.1374) | (0.1381) | (0.1906) | (0.1981) |
| Log of total assets | −0.1110 | -0.2240 | -0.2423 | -0.2290 | -0.2382 |
| | (0.1198) | (0.2046) | (0.2157) | (0.2331) | (0.2396) |
| Constant | 2.3971 | | -11.99 *** | (.) | (.) |
| | (2.3334) | | (3.8898) | | |
| Industry dummies | No | Yes | Yes | Yes | Yes |
| Sample size | 2,536 | 2,536 | 2366 | 2302 | 2080 |
| LR chi-squared | 23.76 | 29.31 | 35.57 | 26.32 | 30.66 |
| Pseudo *R*-squared | 0.078 | 0.12 | 0.1406 | 0.13 | 0.15 |

**Table 5 - Continued**

**Prior Firm Performance and Forced CEO Turnover Probability**

Panel B: Accounting Performance

| Independent Variables | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Variation of one-year lagged EBIT/ASSETS ratio (EBIT1) | -0.0083 *** | -0.0093 ** | -0.0081 ** | -0.0169*** | -0.0089 ** |
| | (0.00321) | (0.0038) | (0.00418) | (0.0055) | (0.0045) |
| Dummy for firms with the CEO and at least two director graduated from ENA (ENA2) | | | -0.1489 | | |
| | | | (0.7549) | | |
| Interacted EBIT1*ENA2 | | | 0.0067 | | |
| | | | (0.0096) | | |
| Dummy for firms with the CEO and at least two directors from the same elite college (EC2) | | | | -0.3820 | |
| | | | | (0.5486) | |
| Interacted EBIT1*EC2 | | | | 0.01646 ** | |
| | | | | (0.0082) | |
| Dummy for firms with the CEO and at least three directors from the same elite college (EC3) | | | | | 0.8161 * |
| | | | | | (0.0618) |
| Interacted EBIT1*EC3 | | | | | -0.0029 |
| | | | | | (0.0081) |
| CEO age | -0.0396 | -0.0297 | -0.0306 | -0.0360 | -0.0313 |
| | (0.0288) | (0.0392) | (0.0403) | (0.0410) | (0.0404) |
| CEO-founder dummy | | -1.2297 | -1.2090 | -1.4375 | -1.4140 |
| | | (1.1310) | (1.1434) | (1.1560) | (1.138*) |
| Largest shareholder (%) | | 0.00974 | 0.0102 | 0.0091 | 0.0085 |
| | | (0.0106) | (0.0107) | (0.0117) | (0.010() |
| Two-tier board dummy | -5.5239 * | -0.0347 | -0.0834 | 0.2150 | -0.1000 |
| | (3.2418) | (0.6125) | (0.6183) | (0.6155) | (0.6107) |
| Board size | | 0.0487 | 0.0477 | 0.0475 | 0.0460 |
| | | (0.0846) | (0.0846) | (0.0849) | (0.0835) |
| Board insiders (%) | | -3.6210 | -3.8046 | -4.0853 | -3.2753 |
| | | (4.3294) | (4.3807) | (4.4349) | (4.2919) |
| Number of CEO cross-directorship | | 0.0507 | 0.0576 | 0.0460 | 0.0530 |
| | | (0.1483) | (0.1502) | (0.1473) | (0.1469) |
| Log of total assets | -0.0279 | -0.3437 | -0.3289 | -0.3513 | -0.3340 |
| | (0.1310) | (0.2316) | (0.2341) | (0.2374) | (0.2355) |
| Constant | -1.0756 | -12.1616 | -12.24*** | -12.1095 | -11.5788 |
| | (2.5506) | (.) | (4.1294) | (.) | (.) |
| Industry dummies | No | Yes | Yes | Yes | Yes |
| Sample size | 2,536 | 2,536 | 2366 | 2302 | 2080 |
| LR chi-squared | 13.44 | 32.38 | 32.89 | 39.21 | 34.35 |
| Pseudo *R*-squared | 0.0487 | 0.1346 | 0.1367 | 0.1630 | 0.1428 |

**Table 6**

**Small World of CEOs and Directors and CEO Re-employment after Dismissal**

I compare the quality of CEO re-employment following a turnover relative to the CEO and director social ties. "Better job" is defined as the situation when an ousted CEO finds a new position in another company with sales at least equal to that of the former employer. All other employments are defined as "worse job." The table reports the percentage of CEOs finding better and worse jobs following CEO turnovers. I also test whether the quality of employment of CEOs with strong social networks is significantly different from CEOs without any social networks. The T-values are in the parentheses. Elite college (*Grande Ecole*) education (broadest ties), Civil Service Corps (*Grand Corps*) membership (closer ties), and membership in the *Inspection des Finances* and *Mines* corps (closest ties) are proxies for CEO social ties. Forced CEO turnover includes all CEO changes except those due to death, illness, normal retirement, and normal succession. *Grands Corps* CEOs are from the following individual corps: *Conseil d'Etat* (Supreme Administrative Court), *Inspection des Finances* (Inspection of Public Finance), *Cour des Comptes* (Audit of Public Finance), *Ponts et Chaussées* (Civil Engineering), *Mines* (Engineering and Industrial Policies). The sample includes 2,536 firm-semesters of the largest publicly traded French companies over the 1994–2001 period compiled by *Le Guide des Etats Majors*. CEO turnover data and related details are provided by the Editor of *Le Guide des Etats Majors*; these were cross-checked against the Lexis-Nexis database.

| | CEOs in firms with no elite-college director (all sample) | CEO and at least one director from the same elite college | Means test | CEO and at least one director from the same *Grand Corps* | Means test | CEO and at least one director from the *Inspection des Finances* corps | Means test | CEO and at least one director from the *Mines* corps | Means test |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (1) = (2) | (3) | (1) = (3) | (4) | (1) = (4) | (5) | (1) = (5) |
| CEO job after CEO turnovers | | | | | | | | | |
| Better job | 8.33% | | | | | | | | |
| Worse job | 91.67% | | | | | | | | |
| CEO job after forced turnover | | | | | | | | | |
| Better job | | 22.39% | (*t* = 2.74)*** | 20.31% | (*t* = 2.36)** | 20.31% | (*t* = 2.36)** | 22.4% | (*t* = 2.7)*** |
| Worse job | | 77.61% | | 79.69% | | 79.69% | | 77.6% | |
| CEO job after voluntary turnover | | | | | | | | | |
| Better job | | 32.89% | (*t* = 4.53)*** | 32% | (*t* = 4.4)*** | 32. 9% | (*t* = 4.5)*** | 30.99% | (*t* = 4.1)*** |
| Worse job | | 67.11% | | 68% | | 67. 1% | | 60.01% | |

**Table 7**
**Interpretation of the Results**

I estimate the probability of forced CEO turnovers relative to prior firm performance using logistic regressions. The sample includes 2,536 firm-semesters of the largest publicly traded companies in France from 1994 to 2001 compiled by *Le Guide des Etats Majors*. For all models, the dependent variable is the forced CEO turnover dummy, which is equal to one if there is a forced CEO turnover and equal to zero if there is no CEO turnover or a voluntary one. The main independent variables are 24-month lagged market-adjusted performance for the semesters prior to CEO turnovers. Control variables relate to CEO characteristics (dummies for CEO-founder and CEO age), firm ownership structure (percentage of shares held by the largest shareholder), board features (size, percentage of insiders, and dummy for two-tier board), and firm characteristics (size and industry dummies). Estimated coefficients are starred with one, two, or three stars if significant at the 10%, 5%, or 1% level, respectively. Standard errors are in parentheses. Data are obtained from *Le Guide des Etats Majors* (Agefi Editions), Datastream, Lexis-Nexis, and Dafsaliens.

| Independent Variables | (1) | (2) | (3) |
|---|---|---|---|
| 24-month lagged stock performance (PER2Y) | -0.0140 ** | -0.0166 ** | -0.0175 ** |
| | (0.0062) | (0.0071) | (0.0069) |
| Dummy for firms with the CEO and at least two directors graduated from ENA (ENA2) | -0.6099 | | |
| | (0.7421) | | |
| Interacted PER2Y*ENA2 | 0.0217 ** | | |
| | (0.0089) | | |
| Dummy for firms with the CEO and at least two directors from the same elite college (EC2) | | -0.6485 | |
| | | (0.5661) | |
| Interacted PER2Y*EC2 | | 0.0203 ** | |
| | | (0.0084) | |
| Dummy for firms with the CEO and at least three directors from the same elite college (EC3) | | | -0.7530 |
| | | | (0.6959) |
| Interacted PER2Y*EC3 | | | 0.0269*** |
| | | | (0.0091) |
| CEO Tenure | -0.1060 * | -0.1041 * | -0.1027 * |
| | (0.0604) | (0.0605) | (0.0600) |
| Outside CEO | 0.7936 | 0.8002 | 0.8440 |
| | (0.5502) | (0.5535) | (0.5607) |
| Dummy for outperforming the industry | -0.0634 | -0.0613 | -0.0807 |
| | (0. 5445) | (0.5431) | (0.5691) |
| CEO age | -0.0625 * | -0.0691 * | -0.0708 * |
| | (0.0406) | (0.0409) | (0.0419) |
| CEO-founder dummy | 0.4375 | 0.3306 | 0.4051 |
| | (0.8651) | (0.8729) | (0.8849) |
| Largest shareholder (%) | 0.0011 | 0.0008 | -0.0004 |
| | (0.0101) | (0.0101) | (0.0103) |
| Two-tier board dummy | -0.0111 | 0.0825 | -0.0202 |
| | (0.6213) | (0.6217) | (0.6279) |
| Board size | 0.0356 | 0.0379 | 0.0340 |
| | (0.0784) | (0.0783) | (0.0797) |
| Board insiders (%) | -3.2132 | -3.3806 | -2.6817 |
| | (4.2350) | (4.3029) | (4.3237) |
| Number of CEO cross-directorship | 0.0190 | 0.0267 | 0.0207 |
| | (0.1394) | (0.1387) | (0.1406) |
| Log of total assets | -0.3013 | -0.2833 | -0.2984 |
| | (0.2305) | (0.2276) | (0.2304) |
| Constant | -10.4207 ** | (.) | (.) |
| | (4.2243) | | |
| Industry dummies | Yes | Yes | Yes |
| Sample size | 2366 | 2302 | 2080 |
| LR chi-squared | 42.20 | 42.77 | 45.54 |
| Pseudo *R*-squared | 0.1685 | 0.1707 | 0.1818 |