

# Founder-CEOs and Stock Market Performance

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## Abstract

Eleven percent of the largest public U.S. firms are headed by the CEO who founded the firm. Founder-CEO firms differ systematically from successor-CEO firms. They have a higher firm valuation. Founder-CEO firms invest more in R&D, have higher capital expenditures, and make more focused mergers and acquisitions. Moreover, an equal-weighted investment strategy that had invested in founder-CEO firms from 1993–2002 would have earned a benchmark-adjusted return of 8.3% annually. A value-weighted investment strategy would have earned an abnormal return of 10.7%. The excess return is robust; after controlling for a wide variety of firm characteristics, CEO characteristics, and industry affiliation, the abnormal return is still 4.4% annually.

*Keywords:* Founder-CEOs, Managerial Characteristics, Corporate Behavior, Performance

*JEL classification:* G32, G34

# 1 Introduction

Eleven percent of the largest public U.S. firms are still headed by a founder. Do these “founder-CEOs” differ from “successor-CEOs”? If so, does this organizational difference translate into differences in firm behavior, valuation, and performance?

Research in quantitative organizational behavior using financial measures is a rapidly growing field. Bertrand and Mullainathan (2003), Bertrand and Schoar (2003), Chevalier and Ellison (1999), and Malmendier and Tate (2005) all investigate whether and how managerial characteristics affect corporate behavior and performance. Data constraints usually limit the managerial characteristics that can be examined in large cross-sectional studies, and measures such as educational background, test scores, or age cohort are conjectured to proxy for managerial characteristics such as knowledge, ability, or risk-taking behavior.

I contribute to this literature by analyzing a uniquely quantifiable aspect of corporate management: the existence of a founder-CEO. Founder-CEO status is a clearly identifiable measure, and considerable differences in managerial characteristics between founder-CEOs and successor-CEOs have been documented. Moreover, founder-CEOs have shaped their organizations from inception, and thus the impact of differences in managerial characteristics on corporate behavior and performance should be particularly strong in founder-CEO firms.

Founder-CEOs differ from successor-CEOs in several aspects. Founder-CEOs often consider their firm as their life’s achievement. This intrinsic motivation encourages founder-CEOs to pursue the optimal shareholder-value maximizing strategy instead of concentrating on short-term actions or instead of “enjoying the quiet life.” Founder-CEOs may have more organization-specific skills. Thanks to their equity

stake and their entrepreneur status, founder-CEOs are likely to have more influence and decision-making power. Founder-CEOs may also have a different attitude towards risk than successor-CEOs, leading to different investment decisions.<sup>1</sup>

To carry out my analysis, I construct a sample of 2,327 large, publicly listed U.S. firms during the 1992–2002 period (14,000 firm years) and identify 361 sample firms, each of whose CEO was the original founder or co-founder of the firm. I confirm the evidence found in prior studies that there are systematic differences between founder-CEO and non-founder-CEO firms with respect to firm valuation (e.g., Adams, Almeida, and Ferreira (2004), Morck, Shleifer, and Vishny (1988), and Palia and Ravid (2003)), using my larger sample and different estimation techniques. I provide new evidence on the investment decisions and stock market returns of founder-CEO firms.

The relationship between firm valuation and investment decisions and founder-CEO status is potentially endogenous. For example, good expected future performance could lead the founder to stay put, or unobservable firm characteristics could cause both the different investment decisions and the founder-CEO status. In all valuation and investment regressions, I therefore use an instrumental variables approach that accounts for endogeneity. A valid instrumental variable needs to fulfill two conditions. First, the instrument needs to be exogenous in the principal equation of interest. Second, the coefficient of the instrument must be non-zero in a linear

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<sup>1</sup>see, e.g., Stein (1989) (short term actions), Bertrand and Mullainathan (2003) (“the quiet life”), Fama and Jensen (1983) (organization-specific skills), Shleifer and Vishny (1997), and Burkhart, Panunzi, and Shleifer (2003) (influence on successions), Adams, Almeida, and Ferreira (2005) (decision-making power), and Begley and Boyd (1987), Kihlstrom and Laffont (1979), and McClelland (1965) (attitudes towards risk). A considerable amount of research in the management and small business literature discusses additional characteristics of entrepreneurs and their impact on the firm (for an overview, see Low and MacMillan (1988), and Shane and Venkataraman (2000); other examples include Begley (1995), Daily and Dalton (1992), Evans and Leighton (1989), Reuber and Fischer (1999), and Willard, Krueger, and Feeser (1992)).

projection of the endogenous variable onto all explanatory variables. I instrument founder-CEO status with an indicator variable that is one if the firm name at the initial public offering is related to the personal name of the founder.<sup>2</sup> The instrument satisfies the first condition: There is no reason to suspect that the name of a corporation at the IPO is related to its current performance and investment decisions. Concerning the second condition, I expect a positive correlation between the instrument and founder-CEO status: It seems more likely that the corporation bears the name, or is related to the name, of the founder(s) of the firm at the IPO if the founder is still present. Indeed, in all linear projections of founder-CEO status on instruments and all other explanatory variables, the coefficient of “personal” name is, consistent with the intuition, positive and highly statistically significant.

In addition, I estimate firm-fixed effects performance and investment regressions. The firm-fixed effects regressions control for unobservable firm characteristics and identify the coefficient of the founder-CEO variable only through the 123 founder-firms in which the founder-CEO steps down during the sample period. For the other founder-CEO firms, the firm-fixed effect and founder-CEO effect cannot be separated.

I find that founder-CEO firms are valued higher than non-founder-CEO firms. The higher firm valuation is robust to controlling for managerial ownership, which suggests that founder-CEOs play a role beyond holding a large fraction of the firm. The investment behavior of founder-CEO firms also differs. They invest more in R&D, have higher capital expenditures, and make more focused mergers and acquisitions. Taken together, my findings suggest that founder-CEOs make different managerial decisions that have a positive impact on firm valuation and performance.

I also study the stock market performance of founder-CEO firms. Although ex

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<sup>2</sup>For a similar approach, see Gompers et al. (2005).

ante I do not expect any effect of founder status on benchmark-adjusted stock market returns if the market fully incorporates the beneficial effect founder-CEOs have on their firms into stock prices, recent evidence suggests that firm-specific governance characteristics are correlated with equity prices (Cremers and Nair (2003), and Gompers, Ishii, and Metrick (2003)). I find that a value-weighted (equal-weighted) investment strategy that bought founder-CEO firms would have earned an abnormal return of 10.7% (8.3%) annually in excess of a benchmark four factor model. The excess return remains sizable at 4.4% annually when I control for tenure, fractional CEO ownership, industry and firm age, and when I include all of the firm characteristics identified by Brennan, Chordia, and Subrahmanyam (1998).

I study several alternative hypotheses that may help explain the excess stock market performance of founder-CEO firms: abnormal M&A announcement returns, unexpected abnormal accounting performance, an implicit target premium, and a corporate governance premium. Of these possible explanations, only the abnormal M&A announcement returns can help explain the excess performance.

My paper is related to the literature that seeks to understand the performance consequences of organizational forms with strong insider ownership. Denis and Denis (1994) and Holderness and Sheehan (1988) analyze firms in which an inside blockholder holds more than 50% of common equity. Anderson and Reeb (2003) find that S&P 500 family-firms have a higher firm valuation, measured by Tobin's Q, and a higher ROA. Villalonga and Amit (2005) study ownership, control and management of family Fortune 500 companies and find that family firms have a higher firm valuation. My study differs from the above studies in that their main focus is on majority ownership or family control. A firm with a third generation family member as a director or large blockholder would be included in the above studies, while I examine

actual founders and how their characteristics impact firm performance.

Jayaraman, et al. (2000) study the stock market performance of 47 large publicly traded founder-CEO firms from 1980–1991, and do not find an overall effect of founder-CEOs. Differences in sample size, sample period and econometric methodology may explain why I obtain different results.

The remainder of the paper is organized as follows. Section 2 deals with sample selection, choice and construction of instrumental variables and offers summary statistics of the data. Section 3 shows the valuation and stock market results. Section 4 discusses the investment behavior of founder-CEOs and relates it to characteristics of entrepreneurs. Section 5 explores reasons for the better performance of founder-CEO firms, and Section 6 concludes.

## 2 Data

### 2.1 Data Sources and Sample Selection

My initial sample consists of firms that are listed in any of the five Investor Responsibility Research Center (IRRC) publications (Rosenbaum 1990, 1993, 1995, 1998, and 2000), and that have filed proxy statements with the SEC between July 1992 and June 2002. I use the IRRC database, because the IRRC collects a comprehensive set of governance data. The IRRC's sample is drawn from the S&P 500, and the annual lists of the largest corporations in *Fortune*, *Forbes*, and *BusinessWeek*.

I obtain information on the firms' CEOs from two sources. S&P's ExecuComp database (August 2002) provides information on CEO identity, characteristics, and compensation for 11,968 firm-year observations, or 86% of the sample. I retrieve the remaining CEO information by looking up proxy statements of the respective firms,

which yields an additional 1,913 firm-years. My total raw sample contains 13,881 firm-years, representing 2,327 unique firms and 3,633 unique CEOs.

To identify founder-CEOs, I study the proxy statements for all 13,881 firm-years. A founder-CEO must either be a founder, a co-founder, or a member of the group that founded the company. A CEO who took over the company through a management or leverage buy-out, or a CEO who belongs to the second or older generation of a family-firm does not qualify as a founder-CEO. When the proxy does not provide information about the founder, I use Hoover's report on the company's history. For the rare cases in which Hoover does not mention the company's founder, I use a Dow Jones Interactive Service news search to verify the founder status of the CEO.<sup>3</sup>

Table 1, Panel A summarizes the founder classification of my sample companies by firms, CEOs, and firm-years. I identify 372 CEOs as founder- or co-founder-CEOs. There are fewer founder-CEO firms, because 11 companies were led subsequently by two different co-founders (e.g., Bed, Bath & Beyond's Leonard Feinstein and Warren Eisenberg). I classify 1,468 firm-years as observations in which the current CEO is either founder or co-founder of the company (10.6% of the total firm-years). All summary statistics and the sample description are based on these numbers. Table 1, Panel B, breaks up the firm-years by fiscal year.<sup>4</sup> The percentage of founder firm-

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<sup>3</sup>Berkshire Hathaway illustrates some of the ambiguities in my founder classification scheme. Warren Buffett founded Buffett Partnership in 1956 and bought Berkshire Hathaway, a textile company, nine years later. He dissolved the Buffett partnership in 1969, but used the Berkshire Hathaway name to continue to acquire companies. Since Warren Buffet fundamentally transformed Berkshire Hathaway from a textile to a holdings and investment company, I classify him as a founder. Another example is the Loews Corp. Larry and Bob Tisch founded Tisch Hotels in the late 1940s and in 1960 gained control of MGM's Loew's Theaters. The Tisch Brothers demolished most of the Loew's center city theaters and sold off the land to developers. It was not until 1971 that they changed the name of their by then diversified conglomerate holdings company to Loews. I therefore classify them as founders of Loews. Fewer than 10 firms have such a subjective classification, and all results hold when I remove these firms from my sample.

<sup>4</sup>A company is classified as fiscal year  $t$  if its fiscal year ends between June year  $t$  and May year  $t + 1$ . I use the August 2002 version of the ExecuComp database, which contains companies that have a fiscal year ending on or before May 31st, 2002 and filed proxies before July 2002. The latter

years does not vary much across calendar years 1992–1997 but is considerably higher for 1998–2000. The IRRC added a substantial number of smaller companies to its list of tracked firms, and about 20% of these companies are headed by a founder-CEO.

In all but the stock market return regressions, I instrument founder-CEO status. I use a combination of “personal” firm name at IPO and decade of incorporation dummies as instruments for founder-CEO status. Ex ante, it seems more likely that the corporation bears the name, or is related to the name, of the founder(s) of the firm if the founder is still present at the initial public offering, and it is more likely that an adjustment in the name of a corporation is made after a founder steps down (e.g., out of respect for the life’s achievement of the founder). At the same time, there is no reason to suspect that the name of a corporation at the IPO should be related to its current performance.<sup>5</sup> Therefore, personal name seems to fulfill the requirements of a good instrumental variable. Three examples show the general procedure of classifying the name of the company as a personal name related to the founder of the company: Dell Computer Corporation, P&G, and Ann Taylor. The most straightforward case of a personal name is the first example, Dell Computer Corporation. Michael Dell, founder of the firm, chose his last name as part of the firm’s name. Whenever a firm’s name contains an abbreviation such as P&G, the second example, I searched Hoover’s, factiva, and the company’s website to determine whether the abbreviation stood for a personal name related to the founder or for a product or technology. Hoover’s states that “*Candle maker William Procter and soap maker James Gamble merged their small Cincinnati businesses in 1837, creating The Procter & Gamble Company (P&G)*”. Therefore P&G would be classified as a personal name. The third example,

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requirement explains the smaller number of observations for fiscal year 2001.

<sup>5</sup>Note that a *change* of name has been shown to correlate with performance (e.g., Robinson and Wu (2004)). Therefore, I use the name of the firm at the initial public offering, and not the concurrent name, in my analysis.

Ann Taylor, would not be classified as a firm with a personal name related to the founder, although the founder chose the name. Consider the following information from Hoover's: "*AnnTaylor Stores started out in 1954 as a shop on Chapel Street in New Haven, Connecticut. Founder Robert Liebskind targeted women who would later be called "preppie", using the conservative (and fictitious) Ann Taylor name*".<sup>6</sup>

In my sample, choosing a firm name related to the personal name is very common for companies incorporated prior to world war II. In the last fifty years, it was more common to name the firm after a product or the principal business (e.g., United Healthcare Corporation), or to give it an invented name (e.g., Microsoft). I expect the incidence of personal firm names to be higher for founder-firms than for non-founder firms in every decade. However, the incidence of founder-firms itself is by definition restricted to younger firms. Therefore, I use as additional instruments the decade of incorporation. I look up the year of incorporation for every company in my sample. I make the following decisions when classifying the year of incorporation. A firm that was incorporated in 1900, had an IPO in 1965, was taken private in 1980 to become a subsidiary of a larger company, and went again public in 1990 would be classified as being incorporated in 1900. A firm that came into existence by a spin off from a firm that was incorporated in 1900 would be classified as incorporated in the year of the spinoff, and not the year of incorporation of the former company. When two firms merge, I use the year of incorporation of the acquirer as year of incorporation of the new firm.<sup>7</sup>

Table 1, Panel C shows the incidence of personal names by decade of incorporation and by founder-CEO status for all 2,327 sample firms. The table confirms that

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<sup>6</sup>I re-estimate all regressions with an instrument that was one only if the firm name contains the full last name of the founder, with similar results.

<sup>7</sup>Changing these classification rules has no effect on the overall results.

founder-CEO firms have a much higher frequency of personal names in all decades with the exception of the last. It also shows that the overall incidence of personal names decreased through time. The table demonstrates that the founder-CEO firms of my sample were mainly incorporated in the 1970s and 1980s.

Table 2 reports the attrition of my sample of founder-CEOs, based on the Center for Research in Security Prices (CRSP) delisting codes and on CEO successions. Of the 372 founder-CEOs of my sample, 41% of the founders are still identified as CEOs in the most recent proxy statement available. In about one-third of my sample of founder-CEOs, a succession event from a founder-CEO to a non-founder-CEO takes place. Founder-CEOs leave the sample in 19% of all cases, because their companies were acquired or merged. An additional 4% of all firms led by founder-CEOs go bankrupt.

## **2.2 Other Data Sources**

Financial information for the sample firms is obtained from Compustat, and market value and stock returns are obtained from the monthly CRSP files. Following the recommendation of Kahle and Walkling (1996), I obtain SIC codes from Compustat. The IRRC maintains a detailed database on characteristics of the boards of directors of large public companies. I also retrieve information on the governance index of Gompers, Ishii, and Metrick (2003) and dual class share structures from the IRRC database. I use the Securities Data Company (SDC) platinum database to identify all completed corporate mergers and acquisitions during the sample period. The institutional holdings data come from SEC Form 13F quarterly filings, also provided by TFN.

## 2.3 Sample Description

I divide the sample into 48 industries, based on the classification of Fama and French (1997), but using the up-to-date classification scheme from Kenneth French's website.<sup>8</sup> Founder-CEO firms are present in 38 out of the 48 industries (80%). Table 3 lists the 20 industries with the highest number of founder-CEO firm-years. Columns 1 to 3 show the number of all firm-years, the number of founder-CEO firm-years and the percentage of founder-CEO firm-years per industry. While Table 3 shows that founder-CEO firms have wide industry dispersion, some industries have a high representation of founder-CEO firms. Founder-CEO firms represent 26.4% of all firm-year observations in the Electronic Equipment category, 25% of all observations in Healthcare, and 22.2% in the Computer category. The highest numbers of founder firm-years per industry are in Business Services (179), Retail (173), and Electronic Equipment (156).

Table 4 presents summary statistics of the sample. It reports cross-sectional means and medians on firm time-series averages. Columns 1 and 2 show firm characteristics of the companies that were never headed by a founder-CEO during the entire sample period, and columns 3 and 4 show the means and medians of firm characteristics for founder-CEO firms. I use a non-parametric Wilcoxon rank sum test to test the equality of medians of the firm characteristics of Table 4, for the founder and non-founder subsamples. All the medians of the firm characteristics of Table 4 are statistically different for founder-CEO and non-founder-CEO firms at less than the 5% level.

While my database contains approximately four to eight times as many firms and significantly more smaller firms than previous studies (e.g., Adams et al. (2004), Amit and Villalonga (2005)), my sample firms are still large firms: non-founder-CEO firms

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<sup>8</sup>[http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data\\_library.html](http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html)

have a mean (median) market value of \$4.4 billion (\$1 billion) and mean (median) total assets of \$8.3 billion (\$1.4 billion). Founder-CEO firms are smaller than the average non-founder firm, both in terms of market value and net sales. Founder-CEO firms have a different capital structure: the mean and median financial leverage, measured as long-term debt over total assets, is smaller for founder-CEO firms than for non-founder-CEO firms.

Differences in three ratios between founder-CEO firms and their non-founder counterparts suggest that founder-CEO firms are more growth-oriented: their lower mean and median book-to-market ratio (the ratio of book value of common equity and deferred taxes (of the previous fiscal year) to market value of common equity (at the end of the previous calendar year)), their higher ratio of capital expenditures to assets, and their higher ratio of research and development expenditures to assets. Some of these differences might be explained by the fact that non-founder-CEO firms are older than founder-CEO firms: the median non-founder-CEO firm was incorporated 42 years ago, compared with an average time since incorporation of 20 years for the founder firms.

Founder-CEO firms, not controlling for other factors, seem to perform better along a variety of measures. They have on average a 42% higher Tobin's Q than non-founder firms, and both the mean and median annualized 1-year and 3-year stock market returns of founder-CEO firms exceed those of the other firms. However, stock returns of founder-CEO firms are more volatile than the returns of non-founder-CEO firms.

Founder-CEOs on average are older and have a substantially longer tenure than hired CEOs (16.4 years vs. 6.4 years). Founder-CEOs still hold a substantial fraction of the equity of their firms. The mean (median) stock ownership of founder-CEOs

is 11.1% (6.7%), while non-founder-CEOs have a mean (median) ownership of 2.1% (0.4%). Of all founder-CEOs, 13.6% hold more than 25% of the outstanding shares of their firms. Founder-CEOs receive a smaller share of their annual total compensation (salary, bonus, option grants, restricted stock grants and other annual payments) in equity-based compensation than non-founder-CEOs, although the percentage difference is small at 3.5%, considering the large difference in shares owned.

### **3 Founder-CEOs and Performance**

In this section, I look for differences in performance and firm valuation between firms led by founder-CEOs and by non-founder-CEOs. In 3.1, I study firm valuation. In 3.2, I study the difference in stock returns and factor loadings between sample firms that are still run by their founder-CEOs and firms that are run by non-founder-CEOs.

#### **3.1 Firm Valuation**

Firm value is measured by Tobin's Q, which is calculated as the ratio of the market value of assets to the book value of assets. The market value is calculated as the sum of the book value of assets and the market value of common stock less the book value of common stock and deferred taxes. The market value of equity is measured at the end of the current calendar year, and the accounting variables are measured in the current fiscal year. The variable measuring the influence of the founder-CEO is a founder dummy variable that is one if the CEO of the firm could be classified as founder at the beginning of the fiscal year, and zero otherwise.

I use three models to detect whether founder-CEO firms have a superior firm performance and valuation. I estimate an instrumental variable regression, an en-

dogenuous treatment effects model, and a firm-fixed effects model. In the first two models, founder-CEO status is instrumented with “personal” firm name and decade of incorporation. The log of sales is used to control for size. I follow Shin and Stulz (2000) and include the log of firm age as of December of year  $t$ . Daines (2001) finds that  $Q$  is different for Delaware and non-Delaware firms, so I also include a Delaware dummy as a control. Morck and Yang (2002) show that S&P 500 inclusion has a positive impact on  $Q$ , which increased during the 1990s. In separate regressions, I also control for CEO specific characteristics such as ownership, CEO age, and CEO tenure. Both regressions include year and the 48 Fama and French (1997) industry dummies, and standard errors are corrected using the Huber-White-Sandwich estimator that takes firm-level clustering into account.

My large sample of founders contains 123 succession events, and allows me to use an additional regression setup that can control for unobserved, firm-specific characteristics, an advantage over previous studies with smaller samples. I estimate a firm-fixed effects model that identifies the coefficient of the founder dummy uniquely through firms in which the CEO changes from founder to non-founder and could eliminate concerns that any excess performance or excess valuation of firms with founder-CEOs is merely a firm effect.

Columns 1 and 2 of table 5 show the results of the second stage of the two-stage least squares instrumental variable regressions. The first-stage regression of founder-CEO dummy on the instruments and all other explanatory variables (not reported) demonstrates that the coefficient on personal name and decade of incorporation is highly significant, suggesting that the instruments work well.<sup>9</sup> The inclusion of CEO-specific characteristics in column 2 does not change the significance of the results.

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<sup>9</sup>E.g., in the regression of column 1, the instrument “personal name” has a coefficient of 0.09 with an associated t-stat of 14.18, and all decade dummies have t-stats that are highly significant.

Founder-CEOs continue to have a sizeable positive and statistically significant impact on firm value as measured by Q, which is consistent with the results of Adams, Almeida, and Ferreira (2003a), Anderson and Reeb (2003), and Palia and Ravid (2003).

Columns 3 and 4 of table 5 show the results of an endogenous treatment effects model. The treatment effects model takes into account that the potentially endogenous founder-CEO status variable is a binary variable, and estimates a probit regression in the first stage. Founder-CEO status has a positive coefficient that is highly statistically and economically significant. The coefficient in the fully specified regression of column 4 is 0.403, which suggests that Tobin's Q in founder-CEO firms is 21.55% higher than in non-founder-CEO firms.<sup>10</sup>

My sample consists of large, public U.S. corporations. One might argue that it is hardly surprising that a firm which is early stage enough to be run by its founder, and has made it into this group, would be highly valued by the market. Three observations help alleviate this concern. First, I include firm age, industry effects, and CEO-specific characteristics in the regression setup. Second, the founder dummy remains economically and statistically significant when I use the firm fixed effects model (column 5 of table 5). Q is 12.7% higher when the founder is CEO, providing new evidence that the Q effect is indeed a founder-CEO, and not a firm fixed effect.<sup>11</sup> Finally, the estimated coefficients in columns 1 to 4 of table 5 are very close to the effects estimated by Adams et al. (200X), and their sample is restricted to the more

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<sup>10</sup>The effect is calculated by dividing the coefficient of 0.403 by the sample average Tobin's Q of 1.82.

<sup>11</sup>After a founder-CEO steps down after a long tenure, the book value of assets might be reset to current market values, generating a large decrease in Tobin's Q and leading to the fixed effects regression results. To assess the validity of this argument, I calculate the change in book value of assets in the last year of the founder-CEO and compare it with the change in book value for the first year of the new CEO. These two values are almost identical, with the median change for the founder being 11.19%, and the median change for the successor being 11.67%.

selective group of fortune 500 firms with 50 founders. This evidence suggests that the statistically and economically significant founder effect is not merely driven by sample selection.

## **3.2 Stock Market Returns**

### **3.2.1 Portfolio Construction**

The Securities Exchange Act of 1934 (Reg. §240.14a) requires a firm to send to its shareholders a proxy statement that provides material facts concerning matters on which the shareholders will vote, as well as data on the last fiscal year's officers and their compensation. Each proxy statement must contain the date on which the document was filed with the SEC; therefore, by studying a proxy statement, one can determine when the statement was made publicly available. Proxy statements are usually filed three months after the end of the fiscal year and one to two months before the annual meeting. The executive compensation information in S&P's ExecuComp database is collected from proxy statements, and the proxy filing date is reported as part of the ExecuComp database in the field SRCDATE.

Each July, starting in 1993 and up to 2002, I form a portfolio by buying all firms whose proxy statements were filed between July of year  $t - 1$  and June of year  $t$ , and whose CEO could be identified as a founder. The portfolio is updated annually. If a firm is delisted in any month between July and June, I include the delisting return from CRSP for the respective firm. In some cases, firms file their proxy statements in July of year  $t - 1$  and in the following year in June. In such cases, I discard the July  $t - 1$  observation to avoid duplicating the same firm in the founder portfolio. The investment strategy I use is fully implementable: at the time the portfolio is constructed, the classification into founder-CEO and non-founder-CEO firms is based

upon publicly available information. In addition, this investment strategy is very conservative. If founder-CEO firms have higher returns, the investment strategy can likely be improved by updating the portfolio more frequently and by removing from the founder sample all firms whose founder-CEO has stepped down. With my current investment strategy, a founder-CEO might have stepped down in August of year  $t - 1$ , yet that firm would still be classified as a founder-CEO firm from July  $t$  until June  $t + 1$ .

The following additional data requirements reduce the original sample size by 4.9%. I exclude 473 firm-years (3.4%) from the sample due to missing Compustat and CRSP data. I remove all ExecuComp firms that are missing the proxy filing date, and I do not use firms that filed their proxies before June 1992 and after July 2002. These two steps remove 85 firm-years (0.6%) from my sample. The avoidance of double-counting reduces the sample size by 132 firm-years. My final sample—the one I use in all return regressions—consists of 13,192 firm-years, of which 1,409 (10.7%) are classified as founder firm-years. It contains 2,270 different firms.

### **3.2.2 Empirical Results**

An equal-weighted (value-weighted) investment in the founder-CEO portfolio in July 1993 with one rebalancing period per year would have yielded an average annual raw return of 16.34% (13.87%) in December 2002, while the equal-weighted (value-weighted) market return over the same period was 9.99% (8.48%).

One possible explanation of this performance difference is that several equity characteristics of founder-CEO firms differ from those of other firms, namely, their exposure to the market factor, market capitalization, book-to-market ratio, and immediate past returns - all characteristics that have been shown to be significant in forecasting

future returns (see, e.g., Banz (1981), Fama and French (1992), and Jegadeesh and Titman (1993)). To analyze whether these differences in characteristics can explain the differences in returns, I estimate a four-factor model that consists of the three Fama-French factors (Fama and French (1993)) and a momentum factor (Carhart (1997)). For the purposes of this paper, I do not engage in the ongoing debate about whether these factors are proxies for risk; I simply view the model as a method of performance attribution. Thus, I interpret the estimated intercept coefficient as the abnormal return in excess of what could have been achieved by an investment in these factors.

My founder-CEO sample contains some of the largest and most successful firms of the 1990s, including Berkshire Hathaway, Charles Schwab, Comcast, Computer Associates International, Dell, Home Depot, Microsoft, Oracle, Sun, and Toys ‘R’ Us. I thus estimate both value- and equal-weighted return regressions to see whether my results are primarily driven by a few large firms.

The two first rows of Table 6 show that a value-weighted portfolio of founder-CEO firms yields a monthly alpha of 89 basis points, which corresponds to an annual rate of 10.68%. An equal-weighted investment in the founder-CEO portfolio yields a monthly alpha of 69 basis points, or an annual rate of 8.28%. This result demonstrates that the excess performance is not driven by the success of a few large firms. It is interesting to note that the factor loadings of HML are significant for both the value- and equal-weighted portfolio but that they change sign. The value-weighted portfolio invests more in growth firms, whereas the equal-weighted portfolio is geared toward a value investment style. The bottom part of Table 6 shows the results of a four-factor return regression on a portfolio of all non-founder-CEO firms. Both the value- and equal-weighted alpha of the non-founder-CEO portfolio are economically small and

statistically indistinguishable from zero. A comparison of the coefficients on RMRF, SMB and HML across the founder-CEO and non-founder-CEO portfolio demonstrates that the founder-CEO portfolio is riskier than the market portfolio, and invested more in smaller firms and firms with higher growth potential.

Table 7 shows the alphas of four-factor model regressions when using alternative specifications that control for various sample characteristics. The first characteristics I control for is the presence of technology firms, which did extraordinarily well in the 1990s, the period from which the majority of my firm-years are taken, and which are over-represented among founder-CEO firms. I repeat the analysis of Table 6, but follow Anderson and Reeb (2003) and exclude firms whose two-digit SIC code is either 35 (Industrial machinery and equipment), 36 (Electronic and other electrical equipment), 38 (Instruments and related products), or 73 (Business Services). While the filter is an approximation, as technology firms operate in a wide array of SIC codes, it removes, e.g., America Online, Apple, Dell, Gateway, Microsoft, Oracle, Peoplesoft, and Sun from the founder-CEO portfolio. The results are in the first row of Table 7. The monthly alpha is reduced for both the value-weighted and equal-weighted regression, but it is still economically and statistically significant. The alpha for the value-weighted portfolio of founder-CEO firms (69 basis points per month) corresponds to an annual rate of 8.28%; the alpha for an equal-weighted investment in the portfolio of founder-CEO firms (48 basis points per month) corresponds to an annual rate of 5.76%. I conclude from this analysis that the presence of technology firms is not the main driver of the excess performance over the four-factor mimicking portfolios.

Although the founder-CEO portfolio has wide industry dispersion, the uneven distribution of founder-CEO and successor-CEO firms within the different industries

suggests that industry affiliation plays an important role. I re-estimate the four-factor model by using industry-adjusted returns. I derive a time series of industry-adjusted returns by subtracting the monthly industry return from the raw returns of my sample firms.<sup>12</sup> The value-weighted monthly alpha drops to 53 basis points (an annual rate of 6.36%) and the equal-weighted monthly alpha drops to 44 basis points (an annual rate of 5.28%). While controlling for industry affiliation removes some of the excess performance of the founder portfolio, industry affiliation alone cannot explain the excess performance reported in Table 6. The alphas of the equal-weighted and value-weighted founder-CEO portfolios remain both economically and statistically significant, at less than the 1% level.

The third and fourth rows of Table 7 show that the excess performance is not a function of the particular sample period chosen, and alleviates any concerns that the increase in sample size in 1998 could be driving the return results. When I divide the sample into two periods of equal length, the value-weighted and equal-weighted portfolios show positive and statistically significant excess performance both in the early and late sample periods. The later subperiod has a considerably higher equal-weighted alpha but a stable value-weighted alpha compared to the earlier sample period. The IRRC started coverage of smaller firms in February 1998. These small founder-CEO firms did well during 1998–2002, moving the alpha of the equal-weighted regression, but they are too small to influence the value-weighted regressions. In unreported results, I analyze the effect of the stock-market downturn. I re-estimate the four factor model regression for the period January 2000 – December 2002 and find coefficients that are similar to the 1998–2002 coefficients, albeit with a higher standard deviation.

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<sup>12</sup>The reported results use equal-weighted industry returns. The result is robust to using value-weighted industry returns.

To control for a variety of equity characteristics other than exposure to the market, size, book-to-market ratio, and momentum, I also conduct cross-sectional Fama-MacBeth (1973) regressions. I use the extensive list of characteristics in Brennan, Chordia, and Subrahmanyam (1998), as well as institutional ownership (Gompers and Metrick (2001)), inclusion in the S&P 500 (Morck and Yang (2002)), an index of the strength of shareholder rights (Gompers, Ishii, and Metrick (2003)), and CEO ownership. For each month in the sample period, I estimate an equal-weighted cross-sectional regression of the industry-adjusted return on a vector of explanatory control variables and the founder dummy and then calculate the mean and time-series standard deviation of the 118 monthly (March 1993 – December 2002) coefficients.<sup>13</sup>

For each firm, the founder dummy variable is updated during the month following the proxy filing date. CEO tenure is the number of months since the CEO took office. CEO ownership is measured as the percentage of common equity held by the CEO at the end of the prior fiscal year. Institutional ownership is measured as shares held by institutions (aggregated over all five types collected by Thomson Financial) divided by total shares outstanding. I use the most recent quarter as of the end of month  $t - 1$ , with shares outstanding measured on the same date. Because the institutional ownership data for March 2000 are deficient, I replace them with the data from the previous quarter. I include a dummy variable indicating membership in the S&P 500 as of the end of month  $t - 1$ . All other explanatory variables are calculated as described in Brennan, Chordia, and Subrahmanyam (1998).

Table 8 reports the results. The first model includes control variables designed to compare the Fama-MacBeth results to the four-factor regressions. The coefficient

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<sup>13</sup>Using the raw returns as a dependent variable or estimating a value-weighted regression yields coefficients that are similar in size, but that have a higher time-series standard deviation, leading to lower significance levels. These results are available upon request.

on the founder dummy has a value of 36 basis points and is statistically significant at the 2% level. The parameter value is close to the corresponding alpha of 44 basis points in the industry-adjusted, equal-weighted four-factor regression of Table 7.

The second model uses all explanatory variables as controls. The coefficient of the founder dummy is economically and statistically significant, remaining at 37 basis points monthly (an annual rate of 4.44%). During my sample period, among the other firm characteristics, only size and two of the momentum factors (the compounded gross return from month  $-4$  to month  $-6$  and the compounded gross return from month  $-7$  to  $-12$ ) are positive and statistically significant. Firm age enters the regression with a statistically significant negative coefficient. The fraction of the firm that is held by the CEO has a negative but statistically insignificant coefficient.

In summary, I thus show that the Fama-MacBeth regressions are not able to explain the excess performance of the founder-CEO firms.

## **4 Characteristics of Entrepreneurs and Investment Behavior**

The performance and valuation results are strongly significant after controlling for managerial ownership, suggesting a role of the founder-CEO beyond an incentive alignment through his equity stake. I now examine the investment behavior and M&A activities of founder-CEO firms, and discuss how the findings are related to characteristics commonly attributed to founders.

## 4.1 Research and Development and Capital Expenditures

Two traits of entrepreneurs that potentially relate to investment behavior are attitude towards risk and the handling of ambiguous situations. For example, Sarasvathy, Simon, and Lave (1998) find that entrepreneurs and bankers manage and perceive risks very differently. Budner (1962) defines intolerance for ambiguity as “a tendency to perceive ambiguous situations as sources of threat”, and Begley and Boyd (1987) find that entrepreneurs handle ambiguous situations better.

The productivity surge during my sample period of the 1990s generated new opportunities that founder-CEOs may have been more willing to seize. I study this hypothesis by examining whether founder-CEO firms have different expenditure patterns. I study capital expenditures and research and development expenditures, relative to the total assets of the firm.

Table 9 shows the results of instrumental variables, endogenous treatment effects, and firm-fixed effects models that include both firm-specific and CEO-specific control variables. The R&D regressions only include firm-year observations for which Compustat reports data (6,300 observations). Both R&D and capital expenditures are scaled by the average of contemporaneous and lagged book value of assets.<sup>14</sup>

Throughout all three specifications, the coefficient of R&D is statistically significant at 1% level. The effect of founder-CEOs seems economically relevant. Firms with founder-CEOs spend up to 8.4% more on research and development than non-founder firms. When I control for unobservable firm-specific characteristics in the firm-fixed effects regressions, and measure the effect of founder-CEOs only against their successors in the same firm, founders spend 1.2 percentage points more on R&D.

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<sup>14</sup>The results are robust to scaling by lagged book value of assets, lagged sales, or lagged properties, plant, and equipment.

Relative to the sample mean of 5.3%, this corresponds to 22.6% more expenditures for research and development.

The average founder-CEO firm has higher capital expenditures than non-founder firms. The increase in capital expenditures is robust through all three specifications. Relative to the average capital expenditure of 6.2% in the sample, the firm-fixed effects coefficient (column 6) corresponds to a 38% higher capital expenditures.

Overall, founder-CEO firms seem to have higher discretionary expenditures. The large coefficients of the firm-fixed effects regressions for both R&D and capex suggest that it is indeed a founder-CEO effect driving the results of R&D and capital expenditures, and not merely a growth firm effect. Furthermore, the use of instrumental variable techniques alleviates concerns that the founder only stays as CEO if the firm is doing well and can afford to grow rapidly.

This, together with the evidence of higher firm valuation, is consistent with founder-CEOs having identified a larger set of new opportunities, which they were more willing to embrace.<sup>15</sup>

## 4.2 Mergers and Acquisitions

I study the completed U.S corporate merger and acquisition activities of founder-CEO and non-founder-CEO firms during my sample period. The M&A activities of founder-CEO firms might be different for at least two reasons. It has been argued that a manager's risk preferences are associated with firm decisions related to takeovers (e.g., Amihud and Lev (1981), and May (1995)), and the above mentioned literature

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<sup>15</sup>Holtz-Eakin, Joulfaian and Rosen (1994) find evidence that small businesses whose owners receive inheritances and decide to continue their business typically grow more rapidly than their peers, suggesting that they had not attained their profit-maximizing levels of capital.

suggests that there exist differences towards risk bearing capacities between founder- and successor-CEOs. Jensen (1993) has conjectured that an executive can use acquisition activity not to buy targets that are strategic and enhance the firm's value, but rather to waste corporate resources and to build an empire. Founder-CEOs might be less prone to such inefficient empire building, because they have a higher equity stake and a longer planning horizon. Empirically, Blanchard, Lopez-de-Silanes, and Shleifer (1994) look at one response of a small sample of firms to large cash receipts from legal settlements and show that these CEOs typically spend the cash on diversifying acquisitions. May (1995) studies the acquisition behavior of different groups of CEOs and finds evidence that the degree of diversification through merger activity is influenced by managerial objectives.

#### **4.2.1 Deal Characteristics**

I use the SDC Platinum database to identify all completed acquisitions by sample firms of private, public, and subsidiary targets from January 1992 to December 2002.

Table 10 shows summary statistics of the data. The 2,327 sample firms make a total of 8,154 acquisitions during the sample period. Non-founder-CEO firms undertake 7,086, and founder-CEO firms undertake 1,068 acquisitions. SDC reports complete transaction data for approximately 47% of all acquisitions. I classify an acquisition as non-diversifying if the target's main business line is operating in the same Fama-French (1997) industry as the acquiror's. Non-founder-CEO firms made 3,777 non-diversifying acquisitions, which corresponds to 53.30% of all acquisitions they made. The univariate statistics show that founder-CEO firms undertook more non-diversifying acquisitions (60.86% of all activity). The majority of all target companies are private companies for both non-founder and founder-CEO firms, followed

by subsidiary and finally public targets. The incidence of private targets is at 60.21% higher for founder-CEO firms than for non-founder-CEO firms (48.90%).

Panel B of table 10 shows the statistics for all mergers and acquisitions for which SDC provides details on transaction price and method of payment. The statistics on diversifying acquisitions and type of target are similar to the overall sample. Non-founder-CEO firms tend to make more cash-only acquisitions, and the overall percentage of cash in deals is higher for non-founder-CEO firms (61.60%) than for founder-CEO firms (56.44%).

#### **4.2.2 Acquisition Count and Acquisition Ratios**

I use two measures to identify acquisition activity. Following Gompers, Ishii, and Metrick (2003), I count the number of acquisitions per firm-year (acquisition count). To gauge the acquisition activity in relation to the size of the firm, I also calculate an acquisition ratio as the sum of the prices of all acquisitions in each calendar year, divided by the firms' average market capitalization for the first day and last day of the year. The latter statistic requires recorded transaction prices, and thus uses only 3,777 and 650 observations for non-founder-CEO firms, and founder-CEO firms, respectively. The mean transaction volume by firm-year is \$596 million (median \$65 million). The largest acquisition of my sample is the merger of AOL and Time Warner in 2001, with a transaction volume of \$165 billion.

Table 11 summarizes the results of regressions for both the acquisition count and the acquisition ratio. I estimate a full information maximum likelihood endogenous switching model for count data (Terza (1998)) to address the issue of endogeneity of founder-CEO status. In this model, the dummy variable for the treatment group (founder-CEO) is instrumented with personal name and decade of incorporation dum-

mies. The first three columns of Table 11 present the results for the acquisition count on the founder dummy, the book to market ratio, the natural logarithm of market capitalization, firm age, and operating cash flow, all measured in December  $t - 1$ . Andrade and Stafford (2003) document that there is industry clustering for acquiring firms during the 1970–1994 period. Therefore, I include the 48 Fama-French industry dummies and year dummies in the regression.

Columns four to six presents the results of instrumental variable Tobit regressions of the acquisition ratio on the same explanatory variables and instruments. I estimate a Tobit regression because 53% of the sample firm-years have a value of zero dollars as dependent variable.

Table 11, column one demonstrates that larger, older growth firms acquire more firms per year. Interestingly, firms that are headed by founder-CEOs make relatively more acquisitions per year than non-founder-CEO firms, even after controlling for CEO-characteristics. CEO ownership enters the regression with a negative effect, and CEO tenure has a positive effect. Table 11, columns two and three split the sample into non-diversifying and diversifying acquisitions and show a clear pattern: founder-CEOs make more non-diversifying acquisitions and less diversifying acquisitions than non-founder-CEOs. The results of columns 2 and 3 are consistent with the conjectures and findings of May (1995) who argues that founder-CEOs are specialists who acquire firms that correspond to their specific skill set.

Overall, firm characteristics with the exception of size do not seem to influence firms' dollar acquisition activity relative to market valuations. The evidence of Table 11, column 4 suggests that founder-CEOs are not different from other firms with respect to the acquisition dollar volume relative to the market valuation. Columns five and six split the acquisitions into diversifying and non-diversifying acquisitions,

and show a similar picture. Together with the results of columns 1 to 3 where it was shown that founders make more acquisitions, it can be concluded that the average acquisition ratio is smaller for founder-CEO firms.

It is interesting to note that younger CEOs who have smaller equity ownership make both more acquisitions and acquisitions of a higher relative value. Their behavior is consistent with an empire building hypothesis, in which young CEOs who do not participate in a potential downside risk are particularly prone to empire building.

Taken together, the results of Table 11 demonstrate that founder-CEO firms are active in the acquisition market, but that they buy targets that are operating in their industry of knowledge and that are relatively small in size. The results are consistent with founder-CEOs buying strategic, value-enhancing targets and being less concerned with both diversification motives and empire building.

## **5 The Stock Market Performance: Discussion**

At first glance, the strong stock market results of founder-CEO firms are puzzling. If the organizational form of a firm mattered for stock market performance and this relationship were fully incorporated by the market, I would not expect any excess performance. I therefore discuss several possible explanations of the excess stock market performance.

### **5.1 Mergers and Acquisitions**

The market reaction to mergers and acquisitions might differ by founder-CEO status. Market participants might believe that founder-CEOs, e.g., due to their high equity stakes or bigger reputational concerns, are less prone to engage in value-destroying

mergers and acquisitions. Given a random acquisition activity of firms, the announcement of an acquisition could then lead to positive abnormal returns.

Table 12, Panel A shows bidder returns to announcement of acquisitions during my sample period, separated by founder-CEO status and method of payment. The announcement return is measured as a cumulative market model adjusted abnormal stock return around initial acquisition announcements. I use five-day cumulative abnormal returns around the announcement date, and the CRSP value-weighted return as market return. The results are very similar using equally-weighted market returns and a shorter  $[-1, 1]$  or longer  $[-3, 3]$  event window.

Panel A of table 12 shows univariate statistics of announcement returns by founder-CEO status. The market reaction to founder-CEO firms announcing acquisitions is positive; both the mean and median cumulative abnormal return is positive and higher than the mean and median for non-founder-CEO firms. When I separate the announcement returns into cash and stock-based acquisitions, it can be seen that the market reaction to cash-based acquisitions is more positive than for stock-based acquisitions. The differential between founder-CEOs and non-founder-CEOs is particularly high for these acquisitions.

Panel B of Table 12 contains the coefficients of founder-CEO status in a multivariate regression. Three regressions are estimated: The CAR for all announcements, the CAR for cash-only acquisition announcements, and the CAR for acquisitions in which some stock is used as payment. The regressions contain the following explanatory variables, which are, for sake of brevity, not reported: Interactions of dummy variables for type of target (private, public, or subsidiary) and method of payment (cash- or stock-based payment). In addition, cash flow and the natural logarithms of size, book-to-market, and firm-value are included. Finally, I include relative dealsize

(constructed as in Masulis et al. (2005)) and a dummy variable measuring whether the acquisition was a diversifying acquisition. Panel B shows that the market reaction to founder-CEO-announced acquisitions is positive. However, only in cash-based acquisitions is the relationship statistically significant.

Overall, there is some evidence that the market was positively surprised by the acquisition announcement of founder-CEO led firms. In particular, a founder's decision to pay cash for a target, and not to diversify her equity stake by including some stock-based payment, was valued and caused positive cumulative abnormal returns.

## 5.2 Abnormal Accounting Performance

Positive stock market returns could potentially be explained by a market's surprise over a better than expected accounting performance of founder-CEO firms. I examine two measures of accounting performance, return on assets (ROA) and operating cash flow (OCF). I follow Holthausen and Larcker (1996) in the definition of both variables.<sup>16</sup> Both OCF and ROA are scaled by the average of total assets in year  $t - 1$  and year  $t$ .

I use an industry and performance matched benchmark, as suggested by Barber and Lyon (1996), Holthausen and Larcker (1996), and Larcker (2003) to detect any abnormal performance. Barber and Lyon (1996) evaluate the empirical power and specification of nine accounting performance measures and of an appropriate test to detect abnormal performance and find that the performance-matched benchmark is most appropriate and that a non-parametric Wilcoxon test is the most powerful test.

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<sup>16</sup>The numerator of ROA is defined as EBITDA (Compustat item 13); the numerator of OCF is EBITDA, plus decrease in accounts receivable (item 2), plus decrease in inventory (item 3), plus increase in accounts payable (item 70), plus increase in other current liabilities (item 72), plus decrease in other current assets (item 68).

They construct their performance-matched benchmark by taking the performance of the test firm and subtracting the contemporaneous median performance of all firms in the same two-digit SIC code whose previous fiscal year's performance is within 10% of the test firm's operating performance. Since I have a smaller sample of firms, I use a matched firm approach and increase the performance band to 30%, as in the procedure described by Larcker (2003). To be consistent with the other regression evidence, I use the Fama-French (1997) industry classification. Barber and Lyon claim that by matching sample firms to firms based on lagged performance, a researcher can control for firm characteristics such as corporate strategy, managerial ability, or the nature of investment opportunities, variables normally unobservable to the researcher. These controls have intuitive appeal for my purpose and provide a very conservative test of unexpected accounting performance. If an outside observer matches a founder-CEO firm to a non-founder-CEO firm with similar accounting performance in year  $t - 1$ , will he be able to detect a better performance of the founder-CEO firm in year  $t$ ?

I do not find any evidence of an abnormal accounting performance, using the two measures described above. The market's surprise over good accounting performance is not a driving factor of the stock market performance results.<sup>17</sup>

### 5.3 Implicit Target Premium

Some of the strongest evidence in the mergers and acquisitions literature documents the positive abnormal returns to target stocks after a bid is announced. For example, Andrade, Mitchell, and Stafford (2001) document that the average three-day abnormal return around the announcement day for targets over the 1990–1998 period is 15.9%.

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<sup>17</sup>A table containing the results is available upon request from the author.

A corporate acquisition can be facilitated if an acquirer has or can obtain a large stake in the firm before the announcement of a bid (Shleifer and Vishny (1986)). Founder-CEOs control large fractions of their firms (the mean percentage ownership of founder-CEOs in my sample is 11.2%; see Table 4).

A founder-CEO might decide to retire and, without an heir apparent, sell his entire equity stake, or the block of shares owned by the founder might be split up after his death. The excess performance of founder-CEO firms that I document may be due to the market's upward adjustment of the takeover probability of founder-CEO firms towards the end of the founder's tenure.

The literature has mainly focused on the dilution of ownership and facilitation of corporate events following the death of a founder or large blockholder. Johnson, et al. (1985) study the announcement returns of unexpected deaths of 53 executives from 1971–1982. Over their entire sample, the announcement return of an executive's death is indistinguishable from zero, while the announcement of the unexpected death of a founder-executive leads to a positive and statistically significant announcement return (although founder-executive firms performed better than their sample peers). Schwert (1985) conjectures that this effect might reflect the market's anticipation that a large controlling block of stock will be broken up after the executive's death. If that event increases the likelihood of a future corporate control fight, and if the stock market anticipates the future takeover, the stock price will rise. Slovin and Sushka (1993) study 85 inside blockholders' deaths from 1973–1989 and find that the death of an inside blockholder does reduce ownership concentration in 60% of all cases as a direct result of either the distribution of the estate or the heirs' selling stock. Furthermore, among the 51 firms whose ownership is diluted, 63% are the target of a corporate acquisition, on average 3.7 years after the death of the insider.

I use the CRSP event file to analyze takeover incidences in which sample firms are targets. I identify all transactions in which a sample firm was acquired during the sample period. I pool the data across years and estimate a pooled time-series and cross-sectional Probit regression, where the dependent variable is one if the firm was a target in a corporate merger or acquisition during the sample year, and zero otherwise. As explanatory variables in the regressions, I use the natural logarithm of market capitalization and firm age as well as the book-to-market ratio, all measured at the end of calendar year  $t - 1$ . Mitchell and Mulherin (1996) demonstrate that there is significant industry clustering by target firms, at least during the 1980s. I therefore control for industry affiliation by including dummy variables for the one-digit SIC codes. Holmström and Kaplan (2001) show that there are distinct time patterns in merger activity, for which I control by including year dummies.

The first column of Table 13 reports the results of the first regression, which includes a founder dummy that is one if the acquired firm was headed by the founder-CEO at the time of the takeover and zero otherwise. The results show that smaller and younger value-firms are more likely to be targets of a corporate control event. The coefficient of the founder dummy is negative and statistically different from zero. The result suggests that firms of active founder-CEOs are less often targets of an acquirer. It is consistent with the argument that the concentration of ownership makes corporate control events more difficult and is evidence against the corporate market as a frequent exit strategy for the founder-CEOs of large, publicly listed firms in my sample. This finding suggests that *ceteris paribus*, it should be more common to observe a discount for founder-CEO firms than to observe a premium, because the likelihood of a successful takeover bid is smaller.

The second column of Table 13 reports the results of a regression in which I

include a founder-successor dummy variable that is one for the four calendar years following the succession event from founder-CEO to a new CEO, and zero otherwise. The sample period for the second regression is 1996–2002 in order not to bias my results.<sup>18</sup> My results suggest that there is no increased takeover activity in the years following the retirement of the firm’s founder. Note that the results for successor firms are not inconsistent with the evidence in Johnson, et al. (1985) or Slovin and Sushka (1993). While they explicitly condition on the death of an inside blockholder, I merely look at firms whose founder-CEO retired. As discussed above, it is common that the founder-CEO would take the position of chairman after he stepped down as CEO and might hold on to his large fractional ownership. Overall, I do not find evidence that the excess performance of founder-CEO firms can be explained by an anticipated target premium.

## 5.4 Corporate Governance Premium

Founder-CEO firms may be subject to less internal and external control mechanisms, because the founder-CEO plays a particularly strong role in the firm. I explore the difference in corporate governance between founder-CEO and non-founder-CEO firms using a large set of governance variables to determine whether part of the excess alpha can be interpreted as a governance risk premium.

Previous literature and recent exchange listing requirements provide guidance in determining indicators of good and bad governance. I use the governance index of Gompers, Ishii, and Metrick (2003) as an aggregate measure of shareholder rights.<sup>19</sup>

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<sup>18</sup>Using a sample period 1992–2002 creates a bias towards finding no effect for the successor dummy, because succession events might have occurred immediately before my sample period starts. The four-year period is chosen based on the results in Slovin and Sushka (1993).

<sup>19</sup>See section II of Gompers, Ishii, and Metrick (2003) for a detailed description of these provisions and previous studies examining subsets of the governance rules and corporate actions.

Jensen (1993) suggests that large boards can be less effective than small boards, and Yermack (1996) shows that firms with smaller boards have a higher valuation, measured by Tobin's Q. Bhagat and Black (2000), Byrd and Hickman (1992), Core, Holthausen, and Larcker (1999), Hallock (1997), Hermalin and Weisbach (1991), Rosenstein and Wyatt (1990), and Shivdasani (1993) discuss other governance characteristics related to the board of directors that I include in my study.<sup>20</sup> The New York Stock Exchange (NYSE 2002) places particular emphasis on increasing the role and authority of independent directors, demanding a majority of independent directors on the board and strengthening the definition of independent directors. Furthermore, the NYSE now requires listed firms to have audit, nominating, and compensation committees comprised solely of independent directors.

I look for differences in the above governance characteristics between founder-CEO and non-founder-CEO firms for a subset of the sample years, as the IRRC started collecting their detailed directors' database only in 1998. In total, I have data on 5,555 firm-years from 1998–2001, 687 of which are founder-CEO firm-years. I match each founder-CEO firm-year observation to two control groups from the 5,555 observations. The first is a firm-age deciles and size-matched control group. The second is an industry and size-matched control group designed to capture the industry dispersion of the founders and of governance characteristics (see, e.g., Gillan, Hartzell, and Starks (2002)).

Table 14 shows the results of these comparisons for calendar year 1999,<sup>21</sup> which are mixed. Founder-CEO firms have smaller boards and give more rights to shareholders, suggesting better governance. Founder-CEO firms more often choose a dual class

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<sup>20</sup>Hermalin and Weisbach (2001) survey the empirical and theoretical literature on the importance of board of director characteristics.

<sup>21</sup>All other sample years have very similar statistics.

structure with detached voting and investment rights, suggesting worse governance. Corporate governance awareness is less prevalent in founder-CEO firms, as only 5% of founder-CEO firms have corporate governance committees (compared to 19% in the control groups).

Founder-CEO firms have a significantly lower percentage of independent directors on their boards (50.5% versus 61% in the control groups).<sup>22</sup> The difference stems from the fact that some directors also perform executive work within the firm and are thus considered dependent. Interestingly, the percentage of linked directors (such as lawyers, interlocked directors, or relatives) who do not perform executive duties does not differ significantly between founder and control firms in my sample.

Founder-CEO firms have fewer directors who hold additional directorships (within the IRRC universe), although this may be a consequence of having fewer outsiders on the board. The boards of directors of founder-CEO firms contain more directors who have high ownership stakes, a possible sign of better aligned incentives between directors and shareholders.

Founder-CEO firms were not as successful as those in the control groups in guaranteeing the independence of the subcommittees, as the NYSE now requires. During the (pre-ruling) sample period, founder-CEO firms have fewer independent directors on all three subcommittees, although only the percentage difference for the compensation committee of the industry and size-matched control sample is statistically significant.

Overall, there is little evidence that the substantial excess return I found is explained by corporate governance mechanisms that are weaker in founder-CEO firms

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<sup>22</sup>Anderson and Reeb (2002) examine the board compositions of S&P 500 firms in which the founding family still has influence and find similar results.

than in the control groups. The main difference seems to be the composition of the boards of directors and of the boards' subcommittees.

## 6 Conclusion

Eleven percent of the largest public U.S. firms are led by founder-CEOs. Founder-CEO firms differ systematically from successor-CEO firms. During the 1990s, founder-CEO firms embraced an expanded investment opportunity set. Founder-CEO firms invested more, had higher R&D expenditures, and engaged in more focused mergers and acquisitions. This investment behavior is consistent with the characteristics ascribed to founder-CEOs in the literature and suggests that founder-CEOs play a particular role in their organizations.

Founder-CEO firms have a higher firm valuation than non-founder-CEO firms, controlling for industry, firm age, CEO ownership and firm size. Using a firm-fixed effects model that identifies the coefficient of the founder variable uniquely through firms in which the CEO changes from founder to non-founder, I provide evidence that it is indeed the founder-CEO who adds value, and not unobservable characteristics of the founder-CEO firm. I alleviate endogeneity concerns of the performance and investment results by using instrumental variable approaches, instrumenting the founder-status by a variable that verifies whether the name of the firm at the initial public offering is related to the personal name of the founder.

An equal-weighted (value-weighted) investment strategy that invested in founder-CEO firms from 1993–2002 would have earned an abnormal return of 8.3% (10.7%) annually in excess of what could have been achieved by a passive investment in the four factors described in Fama and French (1993) and Carhart (1997). The excess

return is persistent after the removal of technology firms, and occurs in both the earlier and later sample period. The excess return remains a sizeable 4.4% when I control for a wide variety of firm characteristics, industry affiliation, and CEO characteristics such as tenure and ownership. I study several alternative hypotheses that could help explain the excess performance, and find some evidence that the market's reaction to M&A announcements of founder-CEO firms contributes to the positive excess performance. I do not find strong evidence of differences in corporate governance between founder-CEO and non-founder-CEO firms, no evidence for an implicit target premium and no evidence of any unexpected accounting performance.

While my stock market return results are consistent with the idea that the market feared that founder-CEOs would expropriate outside shareholders, but overestimated the costs at the beginning of my sample period, my firm valuation results are not: Founder-CEO firms were persistently valued higher than non-founder CEO firms. An alternative explanation is that founder-CEOs are overly optimistic about the future potential of their firms and tend to pursue active growth strategies. These strategies work well during expansions (such as the period that I study), but tend to hurt firms during recessions. Investors might therefore demand a risk-premium for an investment in founder-CEO firms. When I include proxies for the investment activities of founder-CEO firms in the Fama-MacBeth regressions, the excess performance is reduced by 9 basis points, although it remains significant.

Is the excess performance of founder-CEO firms restricted to larger public firms with founder-CEOs who have proven themselves in both the entrepreneurial world and the managerial world, or might we observe an even stronger performance of smaller founder-CEO firms, because the contribution of the founder-CEO decreases when the organization becomes more complex? Answers to these questions could shed

further light on the importance of founder-CEOs and help derive recommendations for shareholders and directors who are concerned about the strong position of a founder-CEO within the firm.

## References

- Adams, Renée B., Heitor Almeida, and Daniel Ferreira, 2004, Understanding the Relationship between Founder-CEOs and Firm Performance, New York University *Working Paper*.
- Adams, Renée B., Heitor Almeida, and Daniel Ferreira, 2005, Powerful CEOs and their Impact on Corporate Performance, New York University *forthcoming Review of Financial Studies*.
- Amihud, Yakov, and Baruch Lev, 1981, Risk Reduction as Managerial Motive for Conglomerate Mergers, *Bell Journal of Economics*, 12, 605–617.
- Anderson, Ronald C., and David M. Reeb, 2002, Who monitors the Families?, American University *Working Paper*.
- Anderson, Ronald C., and David M. Reeb, 2003, Founding-Family Ownership and Firm Performance: Evidence from the S&P 500, *Journal of Finance*, 58, 1301–1328.
- Andrade, Gregor, Mark L. Mitchell, and Erik Stafford, 2001, New Evidence and Perspective on Mergers, *Journal of Economic Perspectives*, 15, 103–120.
- Andrade, Gregor, and Erik Stafford, 2003, Investigating the Economic Role of Mergers, *Journal of Corporate Finance*, 10, 1–36.
- Banz, Rolf, 1981, The Relation Between Return and Market Value of Stocks, *Journal of Financial Economics*, 38, 269–296.
- Barber, Brad M., and John D. Lyon, 1996, Detecting Abnormal Operating Performance: The Empirical Power and Specification of Test Statistics, *Journal of Financial Economics*, 41, 359–399.
- Begley, Thomas M., 1995, Using Founder Status, Age of the Firm, and Company Growth Rate as the Basis for Distinguishing Entrepreneurs From Managers of Smaller Businesses, *Journal of Business Venturing*, 10, 249–263.
- Begley, Thomas M., and D. P. Boyd, 1987, Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses, *Journal of Business Venturing*, 2, 79–93.
- Bertrand, Marianne, and Antoinette Schoar, 2003, Managing with Style: The Effect of Managers on Firm Policies, *Quarterly Journal of Economics*, 118, 1169–1208.
- Bertrand, Marianne, and Sendhil Mullainathan, 2003, Enjoying the Quiet Life? Corporate Governance and Managerial Preferences, *Journal of Political Economy*, 111, 1043–1075.
- Bhagat, Sanjai, and Bernard S. Black, 1998, The Relationship Between Board Composition and Firm Performance, in: K. Hopt, M. Roe, and E. Wymeersch, eds.: *Comparative Corporate Governance: The State of the Art and Emerging Research*, Oxford University Press, New York, NY.

- Blanchard, Olivier J., Florencio Lopez-de-Silanes, and Andrei Shleifer, 1994, What Do Firms Do with Cash Windfalls, *Journal of Financial Economics*, 36, 337–360.
- Brennan, Michael J., Tarun Chordia, and Avanidhar Subrahmanyam, 1998, Alternative Factor Specifications, Security Characteristics, and the Cross-section of Expected Stock Returns, *Journal of Financial Economics*, 49, 345–373.
- Budner, Stanley, 1962, Intolerance of ambiguity as a personality variable, *Journal of Personality*, 30, 29–50.
- Burkhart, Mike, Fausto Panunzi, and Andrei Shleifer, 2003, Family Firms, *Journal of Finance*, 58, 2167–2201.
- Byrd, John W., and Kent A. Hickman, 1992, Do outside directors monitor managers?: Evidence from Tender Offer Bids, *Journal of Financial Economics*, 32, 195–221.
- Carhart, Mark, 1997, On Persistence in Mutual Fund Performance, *Journal of Finance*, 52, 57–82.
- Chevalier, Judith, and Glenn Ellison, 1999, Are Some Mutual Fund Managers Better Than Others? Cross-Sectional Patterns in Behavior and Performance, *Journal of Finance*, 54, 875–899.
- Core, John E., Robert W. Holthausen, and David F. Larcker, 1999, Corporate Governance, Chief Executive Officer Compensation, and Firm Performance, *Journal of Financial Economics*, 51, 371–406.
- Cremers, K.J. Martijn, and Vinay B. Nair, 2003, Governance Mechanisms and Equity Prices, Yale International Center for Finance *Working Paper* No. 03-15.
- Daily, Catherine M., and Dan R. Dalton, 1992, Financial Performance of Founder-Managed Versus Professionally Managed Small Corporations, *Journal of Small Business Management*, 30, 25–34.
- Daines, Robert, 2001, Does Delaware Law Improve Firm Value?, *Journal of Financial Economics*, 62, 525–558.
- Denis, David J., and Diane K. Denis, 1994, Majority Owner-Managers and Organizational Efficiency, *Journal of Corporate Finance*, 1, 91–118.
- Evans, David S., and Linda S. Leighton, 1989, Some Empirical Aspects of Entrepreneurship, *American Economic Review*, 79, 519–535.
- Fama, Eugene F., and Kenneth R. French, 1992, The Cross Section of Expected Stock Returns, *Journal of Finance*, 47, 427–466.
- Fama, Eugene F., and Kenneth R. French, 1993, Common Risk Factors in the Returns on Bonds and Stocks, *Journal of Financial Economics*, 33, 3–53.
- Fama, Eugene F., and Kenneth R. French, 1997, Industry Costs of Equity, *Journal of Financial Economics*, 43, 153–194.

- Fama, Eugene F., and Michael C. Jensen, 1983, Separation of Ownership and Control, *Journal of Law and Economics*, 26, 301–326.
- Fama, Eugene F., and James D. MacBeth, 1973, Risk, Return, and Equilibrium: Empirical tests, *Journal of Political Economy*, 81, 607–636.
- Gillan, Stuart L., Jay C. Hartzell, and Laura T. Starks, 2002, Industries, Investment Opportunities, and Corporate Governance Structures, Center for Corporate Governance University of Delaware *Working Paper* No. 2002-003.
- Gompers, Paul A., Joy L. Ishii, and Andrew Metrick, 2003, Corporate Governance and Equity Prices, *Quarterly Journal of Economics*, 118, 107–155.
- Gompers, Paul A., Joy L. Ishii, and Andrew Metrick, 2005, Separation of Ownership and Control; Valuation of Dual-Class Companies in the United States, Harvard Business School Working Paper.
- Gompers, Paul A., and Andrew Metrick, 2001, Institutional Investors and Equity Prices, *Quarterly Journal of Economics*, 114, 229–260.
- Hallock, K., 1997, Reciprocally Interlocking Boards of Directors and Executive Compensation, *Journal of Financial and Quantitative Analysis*, 32, 331–334.
- Hermalin, Benjamin E., and Michael S. Weisbach, 1991, The Effects of Board Composition and Direct Incentives on Firm Performance, *Financial Management*, 20, 101–112.
- Hermalin, Benjamin E., and Michael S. Weisbach, 2001, Board of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature, NBER *Working Paper* W8161.
- Holderness, Clifford G., and Dennis P. Sheehan, 1988, The Role of Majority Shareholders in Publicly Held Corporations: An Exploratory Analysis, *Journal of Financial Economics*, 20, 317–346.
- Holmström, Bengt, and Steven N. Kaplan, 2001, Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s, *Journal of Economic Perspectives*, 15, 121–144.
- Holthausen, Robert W., and David F. Larcker, 1996, The Financial Performance of Reverse Leveraged Buyouts, *Journal of Financial Economics*, 42, 293–332.
- Holtz-Eakin, Douglas, David Joulfaian, and Harvey S. Rosen, 1994, Sticking it Out: Entrepreneurial Survival and Liquidity Constraints, *Journal of Political Economy*, 102, 53–75.
- Jayaraman, Narayanan, Ajay Khorana, Edward Nelling, and Jeffrey Covin, 2000, CEO Founder Status and Firm Financial Performance, *Strategic Management Journal*, 21, 1215–1224.
- Jegadeesh, Narasimhan, and Sheridan Titman, 1993, Returns to Buying Winners and Selling Losers: Implications for Stock Market Efficiency, *Journal of Finance*, 48, 65–91.

- Jensen, Michael C., 1993, The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems, *Journal of Finance*, 48, 831–880.
- Johnson, W. Bruce, Robert P. Magee, Nandu J. Nagarajan, and Harry A. Newman, 1985, An Analysis of the Stock Price Reaction to Sudden Executive Deaths: Implications for the Managerial Labor Market, *Journal of Accounting and Economics*, 7, 151–174.
- Kahle, Kathleen M., and Ralph A. Walkling, 1996, The Impact of Industry Classifications on Financial Research, *Journal of Financial and Quantitative Analysis*, 31, 309–335.
- Kihlstrom, Richard E., and Jean-Jacques Laffont, 1979, A General Equilibrium Entrepreneurial Theory of Firm Formation Based on Risk Aversion, *Journal of Political Economy*, 87, 719–748.
- Larcker, David F., 2003, Discussion: Are Executive Stock Options Associated with Future Earnings?, University of Pennsylvania *Working Paper*.
- Low, M.B. and I.C. MacMillan, 1988, Entrepreneurship: Past Research and Future Challenges, *Journal of Management*, 14, 139–161.
- Malmendier, Ulrike, and Geoffrey Tate, 2005, CEO Overconfidence and Corporate Investment, *forthcoming Journal of Finance*.
- Masulis, Ronald W., Cong Wang, and Fei Xie, 2005, Corporate Governance and Acquirer Returns, Vanderbilt University Working Paper.
- May, Don O., 1995, Do Managerial Motives Influence Firm Risk Reduction Strategies?, *Journal of Finance*, 50, 1291–1308.
- McClelland, David C., 1965, Need achievement and Entrepreneurship: A Longitudinal Study, *Journal of Personality and Social Psychology*, 1, 389–392.
- Mitchell, Mark L., and J. Harold Mulherin, 1996, The Impact of Industry Shocks on Takeover and Restructuring Activity, *Journal of Financial Economics*, 41, 193–229.
- Morck, Randall K., Andrei Shleifer, and Robert W. Vishny, 1988, Management Ownership and Market Valuation: An Empirical Analysis, *Journal of Financial Economics*, 20, 293–315.
- Morck, Randall K., David A. Stangeland, and Bernard Yeung, 2000, Inherited Wealth, Corporate Control, and Economic Growth, in: Randall Morck, eds.: *Concentrated Corporate Ownership*, University of Chicago Press, Chicago, 2000.
- Morck, Randall K., and Fan Yang, 2002, The Mysterious Growing Value of the S&P 500 Membership, University of Alberta *Working Paper*.
- New York Stock Exchange Corporate Accountability and Listing Standards Committee, 2002, Report June 6, 2002, downloaded on August 18th, 2003 from [http://www.nyse.com/pdfs/corp\\_govreport.pdf](http://www.nyse.com/pdfs/corp_govreport.pdf)

- Palia, Darius, and S. Abraham Ravid, 2003, The Role of Founders in Large Companies: Entrenchment or Valuable Human Capital?, Rutgers University *Working Paper*.
- Pérez-Gonzalez, Francisco, 2002, Does Inherited Control Hurt Firm Performance?, Columbia University *Working Paper*.
- Reuber, A. Rebecca, and Eileen Fischer, 1999, Understanding the Consequences of Founders' Experience, *Journal of Small Business Management*, 37, 30–45.
- Robinson, David T., and Yi Lin Wu, 2004, What's in a Name? Causes and Consequences of Corporate Name Changes, *Duke University Working Paper*.
- Rosenbaum, Virginia, 1990, 1993, 1995, 1998, 2000, *Corporate Takeover Defenses*, Investor Responsibility Research Center Inc., Washington, D.C.
- Rosenstein, Stuart, and Jeffrey G. Wyatt, 1990, Outside Directors, Board Independence and Shareholder Wealth, *Journal of Financial Economics*, 26, 175–191.
- Sarasvathy, D. K., Herbert A. Simon, and Lester Lave, 1998, Perceiving and Managing Business Risks: Differences between Entrepreneurs and Bankers, *Journal of Economic Behavior and Organization*, 33, 207–225.
- Schwert, G. William, 1985, A Discussion of CEO Deaths and the Reaction of Stock Prices, *Journal of Accounting and Economics*, 7, 175–178.
- Shane, Scott, and S. Venkataraman, 2000, The Promise of Entrepreneurship as a Field of Research, *Academy of Management Review*, 25, 217–226.
- Shin, Hyun-Han, and Ren M. Stulz, 2000, Firm Value, Risk, and Growth Opportunities, NBER *Working Paper* No. 7808.
- Shivdasani, Anil, 1993, Board composition, ownership structure, and hostile takeovers, *Journal of Accounting and Economics*, 16, 167–198.
- Shleifer, Andrei, and Robert W. Vishny, 1986, Large Shareholders and Corporate Control, *Journal of Political Economy*, 94, 461–481.
- Shleifer, Andrei, and Robert W. Vishny, 1997, A Survey of Corporate Governance, *Journal of Finance*, 52, 737–783.
- Slovin, Myron B., and Marie E. Sushka, 1993, Ownership Concentration, Corporate Control Activity, and Firm Value: Evidence from the Death of Inside Blockholders, *Journal of Finance*, 48, 1293–1321.
- Stein, Jeremy C., 1989, Efficient Capital Markets, Inefficient Firms: A Model of Myopic Corporate Behavior, *Quarterly Journal of Economics*, 104, 655–669.
- Terza, Joseph V., 1998, Estimating Count Data Models with Endogenous Switching: Sample Selection and Endogenous Treatment Effects, *Journal of Econometrics*, 84, 129–154.
- Villalonga, Belén, and Raphael Amit, 2005, How do Family Ownership, Control, and Management Affect Firm Value?, Harvard Business School *forthcoming Journal of Financial Economics*.

- Wasserman, Noam, 2003, Founder-CEO Succession and the Paradox of Entrepreneurial Success, *Organization Science*, 14, 149–172.
- Willard, Gary E., David A. Krueger, and Henry R. Feeser, 1992, In order to grow, must the founder go: A comparison of performance between founder and non-founder managed high-growth manufacturing firms, *Journal of Business Venturing*, 7, 181–194.
- Yermack, David, 1996, Higher Market Valuation for Firms with a Small Board of Directors, *Journal of Financial Economics*, 40, 185–211.

**Table 1: Sample of Firms and Frequency of Founder-CEO Observations**

**Panel A - Full sample, 1992–2001**

	Total	No. of Founder-CEOs	Frequency [%]
Firms	2,327	361	15.5
CEOs	3,633	372	10.2
Firm-years	13,881	1,468	10.6

**Panel B - Firm-years by fiscal year-end groups**

Fiscal Year	Total	No. of Founder-CEOs	Frequency [%]
1992	1,129	108	9.6
1993	1,322	132	10.0
1994	1,303	120	9.2
1995	1,354	127	9.4
1996	1,325	119	9.0
1997	1,336	133	10.0
1998	1,767	224	12.7
1999	1,691	216	12.8
2000	1,513	169	11.2
2001	1,141	120	10.5

**Panel C - Firm-years by decade of incorporation and frequency of firms with personal name**

year of incorporation	Non-founder firms		Founder-CEO firms	
	No. obs.	% personal	No. obs.	% personal
1940 or prior	753	41.0	1	100.0
1941 to 1950	137	39.4	8	62.5
1951 to 1960	197	19.3	25	40.0
1961 to 1970	300	10.3	60	31.7
1971 to 1980	274	7.8	126	31.9
1981 to 1990	253	5.5	127	15.0
1991 to 2000	52	9.6	14	7.1

**Table 2: Sample Attrition of Founder-CEOs**

Founder-CEOs are CEOs who could be classified as either the founder or co-founder of the firm in any of the sample years. *Remaining in sample* signifies that the founder-CEO is still heading the firm at the end of my sample period. *Succession* documents a succession from a founder-CEO to either another co-founder or a non-founder-CEO. *Merged or acquired* signifies that the founder-CEO firm left the sample due to an acquisition or merger during the sample period, and *Delisted by exchange* signifies a delisting of the founder-CEO firm due to a violation of listing requirements or bankruptcy.

Event	Founder-CEO	
	No. Obs.	Freq. [%]
Remaining in sample	153	41.13
Succession to non-founder	123	33.06
Merged or acquired	71	19.09
Delisted by exchange	14	3.76
Succession to co-founder	11	2.96
TOTAL	372	100.00

**Table 3: Industry Affiliation of Founder-CEO Firms**

The Table displays the 20 industries with the highest incidences of founder-CEO firm-years. The industry classification is based on the 48 Fama-French (1997) industries. Founder-CEO firm-years refer to those firm-years in which the CEO could be classified as either the founder or co-founder of the firm.

Industry	All	Founder-CEO	
	Firm-years	Firm-years	Frequency[%]
Business Services	869	179	20.6
Retail	963	173	18.0
Electronic Equipment	590	156	26.4
Computers	468	104	22.2
Insurance	606	74	12.2
Pharmaceutical Products	423	63	14.9
Wholesale	472	60	12.7
Transportation	350	46	13.1
Restaurants, Hotels, Motels	223	45	20.2
Medical Equipment	231	45	19.5
Automobiles and Trucks	298	45	15.1
Trading	266	43	16.2
Construction	201	43	21.4
Petroleum and Natural Gas	529	35	6.6
Communication	320	35	10.9
Food Products	384	35	9.1
Banking	1,006	33	3.3
Healthcare	128	32	25.0
Measuring&Control Equipment	195	28	14.4
Entertainment	113	23	20.4

**Table 4: Firm and CEO Characteristics**

The Table presents summary statistics of sample firm and CEO characteristics. The sample period is 1992–2001. The total sample consists of the largest publicly listed U.S. firms, a total of 2,327 unique firms. The Table contains cross-sectional means and medians of firm time-series averages. Founder firms are firms that in any of the sample years were headed by a CEO who was the original founder or co-founder of the firm. For the calculation of columns 3 and 4, only the years in which the founder was CEO of the firm were included in the time-series. \*\* and \* indicate a difference in medians between founder-CEO and non-founder-CEO firms at the 1% and 5% significance levels, respectively (based a non-parametric Wilcoxon test).

	Other firms ( $N = 1966$ )		Founder firms ( $N = 361$ )	
	Mean	Median	Mean	Median
<b>Firm Characteristics</b>				
Market Value [MM\$]	4,377.90	1,037.01	3,819.84	845.60
Assets - Total [MM\$]	8,257.43	1,359.59	2,154.79	660.59 **
Net Sales [MM\$]	3,351.83	1,045.47	1,462.27	618.89 **
Common Equity [MM\$]	1,374.45	445.55	802.49	299.71 **
Firm Age [years]	53.60	42.25	22.14	20.00 **
Long-term Debt / Assets	0.22	0.20	0.19	0.12 **
Book / Market	0.62	0.56	0.63	0.44 **
Capex / Assets	0.06	0.05	0.07	0.06 **
R&D / Assets	0.05	0.02	0.07	0.04 *
No R&D reported [%]	50.57	—	40.05	—
Cashflow [%]	6.75	7.53	7.41	8.15 *
<b>Valuation and Performance</b>				
Tobin's Q	1.76	1.32	2.50	1.79 **
Return on Assets [%]	3.41	3.65	3.70	4.21
Annualized 1y return [%]	8.63	10.22	13.20	14.47 **
Annualized 3y return [%]	10.45	11.58	15.15	16.15 **
Volatility [%]	38.40	33.50	49.78	46.22 **
<b>CEO Characteristics</b>				
Age	55.12	55.50	57.16	56.50 **
CEO Tenure [years]	6.36	4.75	16.38	14.25 **
CEO stock ownership [%]	2.14	0.36	11.13	6.71 **
CEO owns $\geq 25\%$ [%]	1.85	—	13.56	—
Equity pay / total pay [%]	38.96	37.67	35.50	35.88 *

**Table 5: Tobin's Q and Founder-CEOs**

The Table shows the results of regressions of Tobin's Q on a founder dummy variable and control variables. In columns one and two, instrumental variable regressions are reported. Columns three and four report the results of an endogenous treatment effects model. In columns 1 through 4, Founder-CEO status is instrumented with decade of incorporation and with an indicator variable that is one if the name of the firm at the IPO contains a personal name related to the founder. Column five reports the results of a firm-fixed effects model, in which the founder-CEO variable is identified through firms in which the CEO changes from founder to successor. Q is the ratio of the market value of assets to the book value of assets, less the industry's median Q (using the 48 Fama-French (1997) industries). The market value is calculated as the sum of the book value of assets and the market value of common stock less the book value of common stock and deferred taxes. The market value of equity is measured at the end of the current calendar year, and the accounting variables are measured in the current fiscal year. The founder dummy variable is one if the CEO could be classified as founder or co-founder of the firm at the beginning of the fiscal year, and zero otherwise. The regressions of columns 1 through 4 include year dummy variables to control for time effects. The standard errors of the coefficients in columns 1 through 4 are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator. Standard errors are reported in parentheses, and significance at the 1%, 5%, and 10% level is indicated by \*\*\*, \*\* and \*, respectively.

	IV Regression		Treatment effects		Fixed Effects
Constant	1.540 ** (0.708)	2.075 *** (0.576)	2.038 *** (0.211)	2.609 *** (0.246)	2.299 *** (0.262)
Founder Dummy	0.998 * (0.561)	1.459 ** (0.705)	0.494 *** (0.167)	0.403 ** (0.177)	0.318 *** (0.092)
Log (firm age)	-0.152 (0.099)	-0.090 (0.108)	-0.222 *** (0.030)	-0.228 *** (0.031)	
Log (sales)	-0.109 *** (0.023)	-0.092 *** (0.025)	-0.111 *** (0.012)	-0.098 *** (0.013)	-0.234 *** (0.035)
Delaware dummy	0.086 (0.054)	0.099 * (0.057)	0.082 *** (0.028)	0.090 *** (0.029)	
S&P 500 dummy	0.653 *** (0.079)	0.624 *** (0.092)	0.657 *** (0.038)	0.661 *** (0.041)	
CEO Ownership		-0.009 (0.010)		0.003 * (0.002)	0.004 (0.004)
CEO Age		-0.020 *** (0.004)		-0.018 *** (0.003)	-0.006 ** (0.002)
Log (CEO Tenure)		0.017 (0.057)		0.088 *** (0.016)	2.609 (0.246)

**Table 6: Performance-Attribution Regressions for the Founder Portfolio**

I estimate a regression based on a four-factor model for a portfolio of firms in which the founder or co-founder is still the CEO. Both value- and equal-weighted monthly return regressions are estimated. The portfolio is reset each July. The dependent variable is the monthly return in excess of the T-bill rate from either a value- or equal-weighted investment in the founder-CEO portfolio. The explanatory variables are RMRF, SMB, HML and Momentum. These variables are the returns to zero-investment portfolios designed to capture market, size, book-to-market, and momentum effects, respectively. Fama and French (1993) and Carhart (1997) provide details on how to construct these factors. The sample period is July 1993 to December 2002. Standard errors are in parentheses, and significance at the 1% and 5% levels is indicated by \*\* and \*, respectively.

	Monthly alpha [%]	RMRF	SMB	HML	Momen- tum	Adjusted R-Squared
<b>Founder-CEO Portfolio</b>						
Value-Weighted	0.890 ** (0.280)	1.043 ** (0.075)	-0.190 * (0.074)	-0.713 ** (0.096)	-0.074 (0.039)	0.851
Equal-Weighted	0.690 ** (0.166)	1.153 ** (0.044)	0.573 ** (0.044)	0.226 ** (0.057)	-0.199 ** (0.023)	0.928
<b>Non-Founder-CEO Portfolio</b>						
Value-Weighted	0.051 (0.056)	0.969 ** (0.015)	-0.142 ** (0.015)	0.168 ** (0.019)	-0.015 (0.008)	0.982
Equal-Weighted	0.123 (0.121)	1.058 ** (0.032)	0.401 ** (0.032)	0.648 ** (0.042)	-0.122 ** (0.017)	0.926

**Table 7: Performance-Attribution Regressions for the Founder Portfolio for Alternative Specifications**

I estimate regressions based on a four-factor model for a portfolio of firms in which the original founder or co-founder is still the CEO. Both value- and equal-weighted monthly return regressions are estimated. The portfolio is reset each July. The explanatory variables are RMRF, SMB, HML and Momentum. These variables are the returns to zero-investment portfolios designed to capture market, size, book-to-market, and momentum effects, respectively. Fama and French (1993) and Carhart (1997) provide details on how to construct these factors. The sample period is July 1993 to December 2002. The first row shows the performance alpha when firms whose two-digit SIC code is 35 (Industrial machinery and equipment), 36 (Electronic and other electrical equipment), 38 (Instruments and related products), and 73 (Business Services) are excluded from the sample. The second regression estimates the four-factor model with industry-adjusted returns as the dependent variable. The third and fourth row show the portfolio alphas when the sample period is split in half. Standard errors are in parentheses, and significance at the 1% and 5% levels is indicated by \*\* and \*, respectively.

	Monthly four-factor alphas [%]	
	Value-weighted	Equal-weighted
No technology firms	0.688 * (0.293)	0.476 * (0.177)
Industry-adjusted returns	0.528 ** (0.169)	0.444 ** (0.132)
July 1993 - March 1998	1.010 ** (0.344)	0.390 * (0.184)
April 1998 - December 2002	0.954 * (0.456)	1.060 ** (0.255)

**Table 8: Fama-MacBeth Month by Month Regressions of Stock Returns on Founder Dummy and Control Variables**

The Table presents the average coefficients and time-series standard errors for 118 cross-sectional regressions for each month from March 1993 to December 2002. The dependent variable is the industry-adjusted stock return for month  $t$ . Industry adjustment is done by subtracting the appropriate Fama-French (1997) industry return each month from each firm's stock return. Firms are assigned to be founder-CEO firms if the CEO mentioned in the annual proxy statement is identifiable as founder or co-founder of the firm. For each firm, the *founder dummy* variable is updated the month following the proxy filing date. Book equity is the book value of common equity plus balance-sheet deferred taxes and is calculated for each firm's latest fiscal year ending in calendar year  $t - 1$ . The *book-to-market* ratio is calculated using market equity in December of year  $t - 1$ . *Market value* is measured in month  $t - 1$ . *Firm age* is the number of months passed since the firm was first listed on a U.S. exchange. *Return  $x_y$*  is the compounded gross return for months  $t - y$  to  $t - x$ . *CEO tenure* is the months passed since the CEO took office. *CEO ownership* is the number of shares held by the CEO divided by the number of shares outstanding. *G-score* is the shareholder rights index of Gompers, et al. (2003). *Price* is the closing price of the stock at the end of month  $t - 2$ . *NASDAQ volume (NYSE-AMEX volume)* is the dollar volume of trading in month  $t - 2$  for stocks that trade on the Nasdaq (NYSE and AMEX). It is approximated as stock price at the end of month  $t - 2$  multiplied by share volume in month  $t - 2$ . For New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) stocks, NASDAQ volume equals zero. For Nasdaq stocks, NYSE-AMEX volume equals zero. *Dividend Yield* is the ratio of dividends in the previous fiscal year (Compustat item 21) to market capitalization measured at calendar year end. *Nasdaq dummy* is a dummy variable equal to one if the firm traded on the Nasdaq Stock Market at the beginning of month  $t$ , and zero otherwise. *S&P 500* is a dummy variable indicating membership in the S&P 500 as of the end of month  $t - 1$ . *Institutional ownership* is measured as shares held by institutions divided by total shares outstanding. I use the most recent quarter as of the end of month  $t - 1$ , with shares outstanding measured on the same date. In the regressions, the values of the accounting variables are matched with industry-adjusted returns from July of year  $t$  to June of year  $t + 1$ . Standard errors are reported in parentheses, and significance at the 1% and 5% levels is indicated by \*\* and \*, respectively.

Table 8, continued

	Model 1	Model 2
Intercept	0.22 (1.12)	-0.94 (1.21)
Founder dummy	0.36 * (0.14)	0.37 * (0.17)
log (book-to-market)	0.09 (0.08)	0.09 (0.07)
log (market value)	0.00 (0.07)	0.38 * (0.17)
Return 2.3	0.54 (0.63)	0.63 (0.58)
Return 4.6	0.52 (0.49)	0.72 (0.48)
Return 7.12	1.02 ** (0.33)	1.07 ** (0.30)
log (firm age) (in months)		-0.06 (0.06)
log (CEO tenure) (in months)		0.04 (0.04)
CEO ownership		-1.18 (0.65)
G-score		0.00 (0.01)
Price		-0.26 (0.14)
NYSE-AMEX Volume		-0.25 (0.15)
NASDAQ Volume		-0.26 (0.16)
Dividend Yield		-0.90 (1.84)
Nasdaq dummy		0.59 (0.97)
S&P 500		-0.17 (0.17)
Institutional Ownership		0.06 (0.34)

**Table 9: R&D and Capital Expenditures**

The table shows the results of regressions of research and development and capital expenditures on a founder dummy variable and control variables. Columns one and two report the results of a 2SLS instrumental variable regression, and columns three and four show the results of an endogenous treatment effects model. Founder-CEO status is instrumented with decade of incorporation and with an indicator variable that is one if the name of the firm at the IPO contains a personal name related to the founder. Columns five and six report the results of a firm-fixed effects model, in which the founder-CEO variable is identified through firms in which the CEO changes from founder to successor. Capex is capital expenditures divided by the average of current and past year's assets. R&D ratio is R&D expenditures divided by the average of current and past year's assets. The founder dummy variable is one if the CEO could be classified as founder or co-founder of the firm at the beginning of the fiscal year, and zero otherwise. Regressions in columns one through four include year and 48 Fama-French (1997) industry dummy variables to control for time and industry, and the standard errors of the coefficients are corrected for serial correlation on a firm level and for heteroscedasticity using the Huber-White-Sandwich estimator. Standard errors are reported in parentheses, and significance at the 1%, 5%, and 10% levels is indicated by \*\*\*, \*\* and \*, respectively.

	IV Regressions		Treatment effects		Fixed Effects	
	R&D	Capex	R&D	Capex	R&D	Capex
Constant	0.180 *** (0.026)	0.207 (0.153)	0.107 *** (0.034)	0.184 ** (0.074)	0.106 *** (0.017)	0.126 ** (0.055)
Founder Dummy	0.084 *** (0.016)	0.176 *** (0.032)	0.056 *** (0.006)	0.108 *** (0.014)	0.012 *** (0.003)	0.024 * (0.013)
Log (sales)	-0.006 *** (0.001)	-0.004 ** (0.002)	-0.006 *** (0.001)	-0.006 *** (0.001)	-0.008 *** (0.001)	0.009 * (0.005)
Return on Assets	-0.122 *** (0.038)		-0.115 *** (0.007)		-0.024 *** (0.006)	
Q		0.032 *** (0.002)		0.034 *** (0.001)		0.029 *** (0.002)
CEO Ownership	-0.001 ** (0.000)	-0.001 (0.001)	-0.001 *** (0.000)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)
CEO Age	-0.001 *** (0.000)	-0.003 *** (0.000)	-0.001 *** (0.000)	-0.002 *** (0.001)	-0.001 (0.002)	-0.001 *** (0.000)
Log (Tenure)	-0.006 ** (0.002)	-0.005 (0.005)	0.004 *** (0.001)	0.008 *** (0.002)		

**Table 10: Mergers and Acquisitions — Summary Statistics**

Panel A of the table presents the number and characteristics of all completed mergers and acquisitions of private, public, and subsidiary targets made by sample firms during the sample period. Panel B shows the number and characteristics of mergers and acquisitions for which a transaction price and method of payment were recorded by SDC. The first two columns show statistics for non-founder-CEO firm-years, the last two columns show statistics for founder-CEO firm-years.

	Non-founder firm-years		Founder firm-years	
	No. Obs.	% of total	No. Obs.	% of total
<b>Panel A — All mergers and acquisitions</b>				
Total Number of Acq.	7,086	100.00	1,068	100.00
Total Number of Acq. with transaction prices	3,287	46.39	502	47.00
Non-diversifying Acq.	3,777	53.30	650	60.86
Diversifying Acq.	3,309	46.70	418	39.14
Private Target	3,465	48.90	643	60.21
Public Target	1,259	17.77	145	13.58
Subsidiary Target	2,362	33.33	280	26.22
<b>Panel B — M&amp;A with recorded transaction prices</b>				
Total Number of Acq.	3,287	100.00	502	100.00
Non-diversifying Acq.	1,911	58.14	320	63.75
Diversifying Acq.	1,376	46.70	182	36.25
Private Target	1,229	48.90	247	49.20
Public Target	931	17.77	107	21.31
Subsidiary Target	1,127	33.33	148	29.48
Cash Only Acq.	1,572	47.82	212	42.23
Average % paid with cash	61.60%		56.44%	
Average % paid with stock	33.59%		38.87%	
Average % paid differently	4.81%		4.69%	

**Table 11: Mergers and Acquisition Activity of Sample Firms**

The first three columns present results from a pooled time-series poisson regression that allows for endogenous treatment effects. The dependent variable is the number of acquisitions per firm per year, the dependent variables include the natural logarithms of book to market ratio, firm age, and market capitalization, as well as cash-flow, shares owned by the CEO, CEO age, and CEO tenure, all measured in December  $t - 1$ . The founder dummy variable is instrumented by personal name and decade of incorporation dummies. Additionally, I include year and the 48 Fama-French industry dummy variables to control for time and industry clustering (not reported). The first column reports the overall results, and the second and third column split the sample into diversifying and non-diversifying acquisitions. The fourth through sixth columns present the results of a pooled instrumental variable Tobit regression of the acquisition ratio on the same explanatory variables, using the same instruments for founder-CEO status. Acquisition ratio is defined as the sum of the value of all corporate acquisitions during a year scaled by the average of market value at the beginning and end of the year the acquisition occurred. Standard errors are reported in parentheses, and significance at the 1% and 5% levels is indicated by \*\* and \*, respectively. The sample period is 1992–2002.

	Acquisition Count			Acquisition Ratio		
	all	diver.	non-diver.	all	diver.	non-diver.
Intercept	-3.70 ** (0.18)	-5.06 ** (0.39)	-3.16 ** (0.36)	-0.32 ** (0.09)	-0.66 ** (0.09)	-0.42 ** (0.12)
Founder Dummy	0.32 ** (0.11)	-0.19 (0.16)	0.47 ** (0.17)	0.14 (0.13)	0.03 (0.13)	0.20 ** (0.16)
Log (Book to Market)	-0.13 ** (0.03)	-0.16 ** (0.04)	-0.14 ** (0.04)	-0.02 (0.01)	-0.02 (0.01)	-0.01 (0.01)
Log (Market Cap)	0.22 ** (0.01)	0.24 ** (0.02)	0.20 ** (0.02)	0.01 (0.01)	0.02 ** (0.00)	0.01 * (0.01)
Log (Firm age)	0.08 * (0.04)	0.10 * (0.05)	0.02 (0.04)	-0.01 (0.02)	0.01 (0.02)	-0.02 (0.02)
Cash Flow	0.28 (0.23)	0.12 (0.32)	0.36 (0.28)	-0.01 (0.07)	0.02 (0.07)	-0.03 (0.09)
CEO Age	-0.01 ** (0.00)	-0.01 (0.01)	-0.02 ** (0.00)	-0.01 ** (0.00)	-0.01 ** (0.00)	-0.01 ** (0.00)
CEO ownership [%]	-0.01 ** (0.00)	-0.01 (0.01)	-0.02 ** (0.00)	-0.01 ** (0.00)	-0.01 (0.00)*	-0.01 ** (0.00)
CEO tenure	0.07 ** (0.02)	0.05 (0.03)	0.09 ** (0.03)	0.00 (0.01)	0.01 (0.01)	0.00 (0.02)

**Table 12: Abnormal M&A Announcement Returns**

Panel A shows the average announcement window acquirer cumulative abnormal return when the sample is split into founder and non-founder CEO firms. The event window is 2 days before to 2 days after the announcement. Panel B shows the results of a regression of the [-2, 2] CAR on the founder dummy and explanatory variables (not reported). The explanatory variables include private and public target dummy variables, and cash- and stock-based method of payment dummy variables. In column one, these two variables are interacted with dummy variable for cash only and stock-based method of payment. Further included are dealsize (transaction price divided by market capitalization), a dummy variable measuring whether the acquisition was diversifying or not, and the natural logarithms of market capitalization, firm age, and book-to-market ratio. Columns 1 to 3 show the results for all acquisitions, cash only acquisitions, and stock-based acquisitions, respectively. Standard errors are in parentheses, and \*\* and \* indicate significance at the 1% and 5% levels, respectively.

**Panel A - Univariate Statistics — Announcement Returns [%]**

	Other firms		Founder-CEO firms	
	Mean	Median	Mean	Median
All acquisitions	0.39	0.19	0.70	0.55
Stock-based Acq.	0.22	-0.13	0.24	0.29
Cash-Only Acq.	0.58	0.51	1.31	0.91

**Panel B: Regression Analysis**

Expl. Variable	All Acq.	Cash-only	Some Stock
Founder dummy	0.25 (0.31)	1.19 ** (0.45)	-0.41 (0.50)
[...]			

**Table 13: Founder-CEO Status and Takeovers**

The Table presents the results of a Probit regression of incidences in which sample firms were targets in a corporate control event. The dependent variable is “target”, a variable that is one if the firm was a target in a given calendar year and zero otherwise. The explanatory variables include the natural logarithm of market capitalization, firm age in months, and the book-to market ratio, all measured at  $t - 1$ . Additionally, I include year and 1-digit SIC-code dummy variables to control for time and industry clustering (not reported). The first regression (column 1) includes the explanatory variable founder, a dummy variable that is one if the CEO at the time of the control event was the founder or co-founder of the firm, and zero otherwise. The sample period is 1992–2002. The second regression (column 2) includes the variable successor, a dummy variable that is equal to one during the four years following the succession event from a founder-CEO to a new CEO, and zero otherwise. The sample period is 1996–2002. Standard errors are reported in parentheses, and significance at the 1% and 5% levels is indicated by \*\* and \*, respectively.

	Founder is CEO	Successor is CEO
Intercept	-2.70 (24.09)	-3.06 (31.03)
Founder	-0.37 ** (0.13)	
Successor		-0.20 (0.26)
Book / Market	0.12 (0.06)	0.12 (0.10)
Log (Market Cap)	-0.08 ** (0.03)	-0.06 (0.03)
Log (Firm age)	-0.14 ** (0.05)	-0.18 (0.05)**

**Table 14: Governance Characteristics of Sample Firms**

The Table contains sample means of key governance characteristics for the sample year 1999. The sample consists of 187 founder firm-years and both a firm-age deciles and size matched control group (column 3) and a Fama-French 48-industry and size-matched control group (column 5). Founder firms are firms that in 1999 were headed by a CEO who was the original founder or co-founder of the firm. \*\* and \* indicate a difference in medians between founder-CEO firm and control group firm governance characteristics at the 1% and 5% significance levels, respectively (based on a non-parametric Wilcoxon test).

Characteristics	Founder-CEO firms		Firm age and size matched group		Industry and size matched group	
	Mean	Median	Mean	Median	Mean	Median
<b>Firm Governance Characteristics</b>						
Board size	7.89	7.00	9.12	9.00**	9.13	9.00**
G-score as in GIM (2003)	7.27	7.00	8.27	8.00**	8.89	9.00**
Dual class shares [%]	11.29	0.00	10.22	0.00	9.09	0.00
Incorporation in Delaware [%]	55.38	100.00	67.20	100.00*	59.36	100.00
Existence of Governance Comm. [%]	5.38	0.00	19.35	0.00**	19.79	0.00**
<b>Board Composition</b>						
Independent directors [%]	50.54	50.00	57.64	60.00**	60.95	63.64**
Employee directors [%]	33.39	33.33	23.37	20.00**	22.17	20.00**
Linked directors [%]	16.07	14.29	18.99	16.67	16.88	14.29
Interlock link [%]	2.90	0.00	2.91	0.00	2.11	0.00
Prof. Service Link [%]	13.96	0.00	13.29	0.00	12.36	0.00
Relatives Link [%]	3.03	0.00	4.28	0.00	3.25	0.00
Supplier Link [%]	5.63	0.00	7.90	0.00	4.92	0.00
<b>Director Characteristics</b>						
Average age of directors	56.76	56.70	57.74	58.25*	58.66	58.64**
Busy directors [%]	7.30	0.00	13.83	10.56**	15.25	12.50**
Directors older than 65 [%]	20.65	16.67	22.06	20.00	23.39	22.22
Directors who own less than 1% [%]	67.84	71.43	77.18	83.33**	79.41	83.33**
<b>NYSE Governance Report</b>						
Independent directors [%] on						
audit committee	79.35	100.00	81.93	100.00	81.49	100.00
nominating committee	63.89	66.67	67.75	66.67	72.26	81.67
compensation committee	81.27	100.00	80.54	100.00	88.34	100.00**