The effect of founders in IPO firms：A look at IPO firm valuation, delisting likelihood, and litigation risk

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ABSTRACT

The effect of founders in IPO firms：A look at IPO firm valuation, delisting likelihood, and litigation risk

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This paper focuses on the impact of founder transitions in initial public offering firms. We examine transitions where the founder remains as CEO, stays in the top management team or on the board of directors, or is not in the firm anymore. We then test the model using 210 IPO firms with SIC codes in the range 7000-8999 that went public between 2000 and 2012. As robustness test, we divide the sample into IPO listings from 2000-05 and 2006-12, and differentiate between laddering vs. non-laddering related litigation, lawsuits for accounting reasons vs. non-accounting reasons, and dismissed vs. non-dismissed cases. The results suggest that firms tend to obtain higher valuations when they have professional managers. After three years, however, having the founder remain as CEO will be associated with a higher failure rate compared to having the founder leave the firm. In addition, within three years after the IPO, when a founder moves to a non-CEO role on the top management team or the board, the firms are less likely to face a lawsuit.

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1. Introduction

It is common knowledge that the founder plays a very important role in any firm. However, a lot of firms choose to let the founder step back and find a professional manager to become the CEO before the initial public offering. This seems reasonable, considering that founders are said to lack the necessary education and experience (Daily & Dalton, 1992). Shirokova and Knatko (2008) suggest that founders may not have the skills required for the further development of the organization, and the entrepreneur may well retire from the CEO position. Founders may not be as appropriate as leaders as was once thought, especially for an IPO firm, which needs to appeal to investors. Despite this, there are some very successful firms whose founders remained as CEO after the IPO such as Bill Gates of Microsoft, Steve Jobs of Apple, and Travis Kalanick of Uber. It is also true that a founder does not have to leave the firm just because they are not the CEO; some firms may provide them with another position in the top management team, or let them remain as chairman of the board prior to the IPO, because they believe that the founder has some knowledge and technical skills that are very important to the firm. This paper answers the following questions: Does founder transition have an impact on IPO valuation? If so, is it a positive impact? After the IPO, would founder transition continue to affect the firm's performance, such as the likelihood of being delisted from SEC or Exchange and the possibility of being sued?

This research brings together 210 IPO firms in the service industry that issued shares on NASDAQ Exchange between 2000 and 2012. There are 108 IPO firms from 2000-05, and 102 firms from 2006-12. We focus our analysis on firms from the service industry classification, as examining a single industry can eliminate cross-industry effects. All the firms included in this sample are from SIC codes 7000-8999 (Services Industry). Among the 210 firms in the 2000-12 IPO sample, we identify 42 firms that were sued in connection with their IPOs. We divide these 42 lawsuits into 11 laddering and 31 non-laddering lawsuits, 20 accounting reason and 22 non-accounting reason lawsuits, and 13 dismissed and 29 non-dismissed lawsuits.

The main objective of this paper is to examine how founder transition affects IPO valuation, IPO firm delisting, and IPO firm litigation. Several researches have studied whether having the founder or professional manger as the CEO could enhance IPO valuation, but there has been

little research on founders who moved to the top management team or the board. This paper classifies founder transitions into three types: the firm is managed by a non-founder CEO and the founder is no longer related to the firm in any position; the original founder CEO stays in the firm and moves to a non-CEO position in the top management team; and the former founder CEO stays in the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. According to Kim et al (2004), in the three years after going public, firms tend to significantly underperform. Therefore, we chose a three-year period to see whether firms were delisted from NASDAQ Exchange due to not meeting requirements, being acquired by another firm at a stock price that was 75% or more below its IPO price within three years after the IPO, or being sued within three years after the IPO. There are some other factors that may also affect the IPO valuation or likelihood of delisting and litigation, such as the firm's age, size, auditor reputation, underwriter rank, net income one year before the IPO, the percentage return of the NASDAQ index, and the CEO's prior industry experience.

According to Certo et al. (2001), founder-led firms are more likely to have an underpriced IPO than professionally managed firms. Martens et al. (2005) finds that replacing the founder-CEO with a professional lead to an increased IPO price. Therefore, for the hypothesis, we assumed that replacing the founder-CEO with a non-founder-CEO before the IPO would lead to a higher IPO valuation than if the founder was retained as CEO, with the same result if the founder moved to the top management team or the board. In terms of the likelihood of delisting and being sued, we hypothesized that this would be lower if the founder either left the company or took another position in the top management team or board than if they stayed on as CEO.

Next, we apply OLS regression to examine whether founder transition has an impact on IPO valuation, and used logistic regression to test whether founder transition would affect the likelihood of delisting and being sued within three years after the IPO, testing the subsamples mentioned above separately for reasons of robustness.

The results show that, controlling for other factors, replacing the founder-CEO with a non-founder-CEO before the IPO tends to lead to a higher IPO valuation and lower delisting rate within three years after the IPO, compared to retaining the founder as CEO. In addition, having

the founder take a non-CEO role in the top management team is related to a lower chance of delisting, and a lower likelihood of being sued, for firms within three years post-IPO, compared to retaining the founder as CEO. Restricting the founder to the board is also associated with a reduced risk of firms being sued within three years post-IPO, compared to having the founder remain as CEO.

For other control factors, we find the following relationships with the target variables. The percentage return on the NASDAQ index during the 30 days before the IPO is positively related to the firm's IPO valuation. The firm's size is positively related to its IPO valuation and negatively related to its risk of being delisted. While the result of firm's age is actually opposed to its size, it is negatively related to its IPO valuation and positively related to its likelihood of being delisted. Both underwriter rank and auditor reputation are negatively related to the chance of delisting, which is quite reasonable.

To summarize, in this study, we examine the impact of founder transition on the IPO valuation and the likelihood of a firm being delisting and sued in the long term. In the process, this paper contributes to the existing research in several ways. One issue is that previous studies which examined the founder-CEOs and professional CEOs in IPO firms did not specify whether the founder had left the firm, moved to the top management team, or took a position on the board when they were replaced by a professional CEO. Our empirical setup closely follows that employed by Martens et al. (2005). However, we expand their analysis by testing how the presence of founders affects a firm's delisting rate and litigation risk. In addition, we categorize lawsuits into several groups: laddering vs. non-laddering-related litigation, lawsuits filed in connection with accounting fraud vs. non-accounting lawsuits, and dismissed vs. non-dismissed cases.

The rest of this paper is organized as follows: Section 2 reviews the related literature; Section 3 develops the underlying hypotheses; Section 4 defines the variables and details the methodology. Section 5 describes the sample data and reports the empirical results. Section 6 presents the robustness test approach and results; finally, Section 7 concludes.

2. Literature Review

Many papers have investigated the relationship between having a founder-CEO and a firm's stock market performance. While there is evidence suggesting that founder-CEOs are more likely than professional CEOs to have an underpriced IPO, there is no agreement on how founder-CEOs should be replaced, and there is not enough evidence about the impact of founder transitions on the long-term performance of IPO firms; for instance, in terms of the possibility of being delisted and the likelihood of facing litigation.

2.1 Studies on founder-CEOs

In some articles, founder-CEOs are seen in a negative light. For example, Bennedsen et al. (2006) find that family-CEO underperformance is particularly large in fast-growing industries, industries with highly skilled labor force, and relatively large firms. Daily and Dalton (1992) suggest that founders may lack the knowledge and experience of professional managerial assistants. Although founders may be unable to effectively manage a growing firm on a day-to-day basis, they can remain on the board of directors and thereby retain some critical control. Shirokova and Knatko (2008) indicate that founders may not have the skills required for the further development of the organization, and the entrepreneur may well retire from the CEO position. In addition, middle managers tend to be mediocre because they know they have little opportunity for advancement; as a result, they have an adverse impact on the company's growth. Certo et al. (2001) note that founder-led firms are more likely to have an underpriced IPO than professionally managed firms. Martens et al. (2005) find that replacing the founder-CEO with a professional resulted in an increase of, on average, $12 million in the valuation of an initial public offering on a U.S. stock exchange between 1996 and 2000.

In contrast, some other papers yielded empirical results that did not support replacing the founder before the firm's IPO, taking into account both short- and long-term performance. Fahlenbrach (2009) discovers that founder-CEO firms invest more in research and development, have higher capital expenditures, and make more sharply focused mergers and acquisitions. According to his findings, founder-CEO firms not only have a higher firm valuation than non-founder-CEO firms, but also have a higher subsequent stock market performance. One possible explanation for this is that, during the 1990s, founder-CEOs successfully embraced an expanded investment

opportunity set. Certo et al. (2001) and Nelson (2003) indicate that one-third to one-half of IPO firms go public with founder CEOs, and that founder-led firms tend to receive higher valuations at their IPO than non-founder-led firms.

2.2 Studies on IPO valuation

Some researchers have noted that retaining the founder as CEO could lead to a higher IPO valuation. For example, Jayraman et al. (2000) suggest that a willingness to undertake risks and a high desire for achievement are founder-typical characteristics that one might expect to generate and sustain superior performance over time. Bruton et al. (2010) argue that founders' retained share ownership signals their private information on the higher quality of their IPO firms and this positively affects IPO value. Also, Bains (2007) indicates that early removal of the founding is correlated with poorer performance than retaining the founding team's skills.

Others have postulated that replacing the founder with an outsider as CEO can increase the firm's value at the time of the IPO. Certo et al. (2001) and Nelson (2003) indicate that this is an expensive move that may send a signal to investors that reduces their uncertainty about the firm's value, leading to a higher IPO price. Certo et al. (2001) also find that investment bankers are more likely to regard founder CEOs as optimistically biased and relatively unreceptive to information that fails to confirm their beliefs. If investment bankers associate increased uncertainty with firm founders, they are likely to set lower prices for IPO firms with founder as their CEOs than for those firms with non-founder CEOs.

In addition, Jain and Tabak (2008) indicate that venture capital participation reduces the probability of having a founder CEO at IPO. Because strategic leadership skills are more highly valued than operational skills by VCs (venture capitalists), when founders are perceived not to have such skills, VCs often persuade the founder CEO to step down before the IPO in favour of professionals with the strategic leadership skills, education background, and experience to manage the IPO process and lead the firm forward as a public company.

2.3 Studies on IPO firm delisting

Despite the growing literature on founder transitions, there have not been many empirical results on whether such transitions have an impact on firms' delisting rates after the IPO. According to Kim et al. (2004), a large proportion of IPO firms survive for the first year following the IPO but delist by the end of the third year. The source also states that most NASDAQ delistings are due to firms failing to meet the minimum capital requirements for continued listing.

In the CRSP database, delisting codes contain many classifications: active, mergers, exchanges, liquidations, dropped, expirations, and domestics that became foreign. Young et al. (2008) note that not all delistings represent failure. Delisting due to inability to meet listing exchange requirements (codes 500 to 599) is referred to as a failure, but delistings due to mergers and acquisitions (M & As) (codes 200 to 299) represent a grey area. Some managers may force M&As to obtain private benefits. Fama and French (2004) also argue that low-quality IPO firms are more likely to merge. However, Zingales (1995) believes that the IPO may be the first step in a gradual sale of the company, and subsequent acquisition may not indicate failure.

Thus, voluntary delisting or an acquisition by another firm may or may not be defined as a failure, especially if the firm is acquired at a price above its IPO valuation. When a firm is delisted for failing to meet the exchange requirements or is acquired by another firm at a stock price that was 75% or more below its IPO price within three years after the IPO, we consider it as a delisting failure.

2.4 Studies on IPO firm litigation

Although a large amount of research focuses on IPO firm litigations, there have not been many studies on whether founder transitions have an impact on the litigation risk for firms after the IPO. According to Lowry and Shu (2002), the potential costs of litigation are substantial for a firm that is planning to go public, and one of the most highly publicized costs of litigation is the settlement payment, which averages $3.3 million in their sample and represents 11% of the total proceeds raised. There are other potential costs of lawsuits such as blows to the reputation of both the IPO firm and its managers, legal fees, and the loss of opportunity from the time dedicated to the lawsuit. Therefore, when a firm faces a securities class action lawsuit under

Section 11 of the 1933 Securities Act within three years of their IPO, we consider this a litigation failure.

When a company goes public, its founders or professional managers may confront a series of pressures over meeting investors' high expectations. There is probably a difference between professional managers and founders in terms of their attitudes and resolutions in facing these pressures. Professional managers, especially salary-based CEOs, would rise to the challenge by leveraging their prior experience and excellent education and knowledge. Meanwhile, founder CEOs, who consider that stock price is associated with their wealth, may be tempted to engage in manipulative or fraudulent activities, especially if they lack education and experience.

Agrawal and Chadha (2005) indicate that the probability of restatement is significantly higher in companies in which the CEO belongs to the founding family. In addition, Emend et al. (2007) find that the likelihood of a mis-stated financial statement increases greatly when the CEO has extremely sizable holdings of in-the-money stock options. Johnson et al. (2009) note that firm founders have high levels of risk tolerance and aggressiveness, which could arguably increase their likelihood of committing fraud. Finally, according to Agrawal and Cooper (2010), a founder CEO could use his influence to limit monitoring from independent directors, leading to a higher rate of manipulation and, consequently, a greater chance of their IPO firm being sued.

Overall, there have been extensive studies on IPO valuation, firm delisting, and firm litigation. However, few have combined these factors with founder transitions to examine whether there is a relationship between them.

3. Hypothesis

3.1 Impact of founder transition on IPO valuation

Some researchers have argued that a remaining founder as CEO has a positive impact on IPO firms; for instance, Mousa and Wales (2012) conclude that firms with founder CEOs are more likely to value and implement an entrepreneurial orientation thus increases post-IPO survival. Meanwhile, Certo et al. (2007) note that when founder CEOs retain higher levels of equity these

serve as valuable signals and such signals help reduce uncertainty and skepticism regarding an IPO firm's performance prospects.

Conversely, other papers have indicated that the departure of a founder is a good move for a company. According to Boeker and Karichalil (2002) firms with low founder ownership and fast growth tend to replace their founders. Additionally, Sanders and Boivie (2004) find that when founder-managers hold significant equity stakes in the IPO firm, there is a greater potential for these individuals to abuse public market investors.

Martens et al. (2005) find that replacing a founder-CEO with a professional could lead to an increased valuation at IPO. Certo et al. (2001), similarly, note that founder-led firms are more likely to have an underpriced IPO than professionally managed firms.

All the studies mentioned above assume that once the founder is replaced as CEO, they will leave the company. However, this is not necessarily the case. Founders can still play a key role by taking another position in the top management team, or staying on as a director or even chairman of the board. Some firms believe that the founder possesses knowledge and technical skills that are very important, leading them to offer the founder a position in the top management team. Some may keep the founder on the board due to his vision and knowledge. Accordingly, this paper classifies founder transitions into three types: founder leaves the firm, founder stays on in a non-CEO role in the top management team, and founder only stays on the board.

Based on the previous empirical results, the first three hypotheses to be tested in this paper are as follows:

Hypothesis 1: Replacing a founder CEO with a non-founder CEO before the IPO will lead to a higher IPO valuation.

Hypothesis 2: Retaining the founder in a non-CEO role in the top management team will be related to a higher IPO valuation, compared to retaining the founder as CEO.

Hypothesis 3: Restricting the founder to a position on the board will be associated with a higher IPO valuation than if the founder is retained as CEO.

3.2 Impact of founder transition on likelihood of IPO firm delisting

According to Bradley et al. (2006), over the three-year period following the IPO, penny stock IPOs have a significant higher percentage of firms that delist for liquidation or poor performance. Yung et al. (2008) note that a lot of firms going public during waves will become worthless and the most natural empirical proxy for worthlessness is bankruptcy or delisting. Ang et al. (2007) indicate that while the majority of IPOs survive their first year, 39% of IPOs delist within five years. Bloomfield and Cho (2011) believe that firms may have delisted simply because the CEO chose to delist. Therefore, CEO characteristics plays key role in a delisting process. As mentioned before, founder CEOs seem to have a bad reputation, therefore, retaining the founder as CEO may has a bad impact on the company's performance.

We also mentioned that, when a firm is delisted for failing to meet the exchange requirements or is acquired by another firm at a stock price 75% or more below its IPO price within three years after the IPO, we consider it a delisting failure. With the bad performance of founder CEOs, there is a possibility that founder transition could be associated with the likelihood of an IPO firm incurring a delisting failure.

Based on the literature and analysis above, the following hypotheses have been formed:

Hypothesis 4: Replacing the founder-CEO with a non-founder-CEO before the IPO will lead to a lower delisting failure rate for firms within three years post-IPO, compared to retaining the founder as CEO.

Hypothesis 5: Having the founder take a non-CEO role in the top management team will be related to a lower delisting failure rate for firms within three years post-IPO, compared to retaining the founder as CEO.

Hypothesis 6: Having the founder only on the board will be associated with a lower delisting failure rate for firms within three years post-IPO, compared to retaining the founder as CEO.

3.3 Impact of founder transition on likelihood of IPO firm litigation

Once a firm has an IPO, founders or professional managers may be under a lot of pressure to satisfy the high expectations of investors. Founder-CEOs really care about the stock price, because it is literally related to their wealth. As stated above, Johnson et al. (2009) note that firm founders have high levels of risk tolerance and aggressiveness, which could increase the likelihood of committing fraud. When facing high pressures, founder-CEOs tend to engage in manipulative or fraudulent actions, especially those without education and prior experience of managing IPO firms. It seems reasonable that replacing the founder-CEO with a non-founder-CEO could lead to a lower likelihood of being sued.

In addition, as we mentioned before, founder transitions have three classifications. The founder does not have to leave the company; we assume that the likelihood of being sued would decrease when a founder becomes a non-CEO member in the top management team or on the board.

Based on the research analysis above, the following hypotheses are presented:

Hypothesis 7: Replacing the founder-CEO with a non-founder-CEO before the IPO will lead to a lower likelihood of a firm being sued within three years post-IPO, compared to retaining the founder as CEO.

Hypothesis 8: Having the founder take a non-CEO role in the top management team will be related to a lower likelihood of a firm being sued within three years post-IPO, compared to retaining the founder as CEO.

Hypothesis 9: Having the founder only on the board will be associated with a lower likelihood of a firm being sued within three years post-IPO, compared to retaining the founder as CEO.

3.4 Other influential factors

We hypothesize that the IPO valuation, firm delisting failure rate, and the likelihood of being sued also depends on the following factors:

Firm age

According to Loderer and Waelchli (2011), there is an apparent worsening of corporate governance and performance in older firms. Therefore, we assume that firm age is negatively related to IPO valuation and positively related to the likelihood of being delisted and sued.

Firm size

Gu (2003) notes that, in general, firm size has a positive impact on IPO performance. Accordingly, we assume that firm size is positively associated with IPO valuation and negatively associated with the likelihood of being delisted and sued.

Auditor reputation

Bing (2009) indicates that there is a significant negative correlation between auditor reputation and stock underpricing, which implies that auditor reputation has a positive impact on IPO valuation. This leads us to assume that auditor reputation has a negative impact on the possibility of being delisted and sued.

Underwriter rank

Kirkulak and Davis (2005) conclude that the relationship between underwriter reputation and underpricing reflects the level of demand for the issue. Therefore, we assume that underwriter rank is positively related to IPO valuation and negatively related to the chance of being delisted and sued.

Positive net income

Ducharme et al. (2001) determine that pre-IPO abnormal accruals are positively related to initial firm value. Based on this, we assume that if a firm reports a positive net income in the year before the IPO, it would have a higher IPO valuation and a reduced likelihood of being delisted and sued.

NASDAQ 30-day return

Jenkinson and Ljungqvist (2001) suggest that momentum effects have an influence on IPO performance, since the percentage return on the NASDAQ index during the 30 calendar days before the IPO represents the market value. As a result, we assume that the NASDAQ 30-day return has a positive influence on IPO valuation and a negative impact on the likelihood of being delisted and sued.

Prior industry experience

Daily et al. (2005) show that the prior experience of CEOs leads to high IPO management quality. We therefore assume that if the CEO has excellent management experience in the same industry as the issuing firm, the firm tends to have a higher IPO valuation and a reduced chance of being delisted and sued.

4.Data and Methodology

4.1 Sample selection

We collect 210 IPO firms in the service industry that issued shares on the NASDAQ Exchange between 2000 and 2012. There are 108 IPO firms from 2000-05 and 102 from 2006-12. We have focused on firms from the service industry classification, as using a single industry can eliminate cross-industry effects that may distort the results. All the firms included in this sample are from SIC codes 7000-8999 (Service Industry). We select our sample firms based on the information provided in prospectuses filed with the Securities Exchange Commission, which are available through the SEC's EDGAR database (S-1 filing). We collect delisting information from the CRSP database. In addition, we reference Stanford University's Securities Class Action Clearinghouse (http://securities.stanford.edu) to identify firms that faced a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO. From the 210 firms in the 2000-12 IPO sample, we identify 42 that were sued in connection with their IPOs. As mentioned earlier, we divide these 42 lawsuits into 11 laddering and 31 non-laddering lawsuits, 20 accounting reason and 22 non-accounting reason lawsuits, and 13 dismissed and 29 non-dismissed lawsuits.

4.2 Dependent variables

We used three dependent variables in this study. First, there is the amount of capital raised through the IPO (number of shares * offering price). This amount is the valuation of the IPO and represents the key resource acquired by the IPO firm in the process, and is therefore a good measurement of short-term performance. As the data was left-skewed, we use a natural logarithmic function for the calculation. Second, we analyze the long-term performance of the IPO firms using a variable that represents delisting failure from the NASDAQ Exchange within three years after the IPO date. The reason we choose a three-year period is because Kim et al. (2004) find that return on assets 3 years after the IPO is 70% lower than during the year before the IPO and that company performance data are required to report up to 3 years of financial performance. When firms fail to meet SEC or stock exchange requirements, or when they voluntarily remove themselves from the stock exchange because they or their management purchase the outstanding shares, or when they are acquired by anther company, they may be delisted. However, if the firm is delisted voluntarily or acquired at a price above its IPO valuation, we may not consider it as a "delisting failure". Therefore, we identify the variable *delisting* as "1" if it is delisted for failing to achieve SEC or stock exchange requirements or is acquired by another firm at a price which is 75% or more below its IPO valuation; otherwise, as "0". Finally, we define the variable *litigation* as "1" if the firm face a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, as "0". This is because, as a public company, facing a lawsuit entails high cost and loss of time, which represents a "failure" in long-term performance. We test the hypothesis on the IPO valuation using OLS regression analysis, and use logistic regression for the three-year delisting analysis and three-year lawsuit analysis.

4.3 Independent variables

In this study, the primary independent variable is the status of the firm's original founder-CEO. The *founder-leave* variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the *founder-top* variable as a dichotomous measure, whereby "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. We define the *founder-board* variable as a dummy variable , whereby "1" indicates that the

former-founder CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. In all these cases, the comparison case is where the original founder CEO remains as the CEO.

4.4 Control variables

To account for possible impacts on IPO valuation and firm performance, this study uses a number of control variables. First, there are some control variables for firms which we believe have an influence on IPO and firm performance. We control for *firm age* from the date of incorporation to the date of IPO, since Clark (2002) indicates that excess returns are positively associated with logged age at IPO at a statistically significant level. We also consider *Ln (employees)* has an impact on valuations and performance. Since the sample firms are only in the service industry, we use the number of employees as a measure of firm size and then compute the natural log of the number of employees at the time of IPO, due to the skewedness of the data. Krishnamurthy et al. (2006) find that auditor reputation and independence have a material impact on the credibility and audit quality of audited financial statements and the market factors this into the prices of firm shares. Therefore, we control *auditor reputation* as a dichotomous variable, wherein "1" represents that the auditing firm is one of the Big 4 audit firms; otherwise, the value is "0" (non-Big 4). Loughran and Ritter (2004) rank the underwriter prestige values from 0-9; we control *underwriter rank* using this method. This study also includes a dummy variable, *net positive income*, which is a measure of profitability wherein "1" indicates a firm that reports a net profit in the year before the IPO, otherwise, the value is "0". Second, there is a market-level control variable, *NASDAQ 30-days return.* Since we collect all the sample IPOs from the NASDAQ Exchange, we control the NASDAQ market performance in the 30 days prior to the IPO and measure it as a percentage return on the NASDAQ index during this period. Finally, Yang et al. (2011) indicate that a CEO's characteristics, such as prior executive experience, are significantly related to their IPO performance. Therefore, we use a dichotomous variable for CEOs, *prior industry experience*, whereby "1" represents that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0".

4.5 Regression model

This paper tests the impact of founder transitions on IPO valuations using OLS regressions. In model 1, we examine how IPO valuations were influenced by the control variables. In model 2, we incorporate the three founder variables. Below are the two models:

Model 1:

$$\ln(IPO\ price * offer\ amounts) = \alpha + \beta_1 * firm\ age + \beta_2 * nasdaq\ 30\ day\ return + \beta_3 * \ln(employees) + \beta_4 * auditor\ reputation + \beta_5 * underwriter\ rank + \beta_6 * positive\ net\ income + \beta_7 * prior\ industry\ experience$$

Model 2:

$$\ln(IPO\ price * offer\ amounts) = \alpha + \beta_1 * founder - leave + \beta_2 * founder - top + \beta_3 * founder - board + \beta_4 * firm\ age + \beta_5 * nasdaq\ 30\ day\ return + \beta_6 * \ln(employees) + \beta_7 * auditor\ reputation + \beta_8 * underwriter\ rank + \beta_9 * positive\ net\ income + \beta_{10} * prior\ industry\ experience$$

We also examine the influence of founder transitions on three-year delisting failures of IPO firms using logistic regressions. In model 3, we examine how delisting failures are affected by the control variables. In model 4, we incorporate the three founder variables. Below are the two models:

Model 3:

$$delisting = \alpha + \beta_1 * firm\ age + \beta_2 * nasdaq\ 30\ day\ return + \beta_3 * \ln(employees) + \beta_4 * auditor\ reputation + \beta_5 * underwriter\ rank + \beta_6 * positive\ net\ income + \beta_7 * prior\ industry\ experience$$

Model 4:

$$\text{delisting} = \alpha + \beta_1 * founder - leave + \beta_2 * founder - top + \beta_3 * founder - board + \beta_4 * firm\ age + \beta_5 * nasdaq\ 30\ day\ return + \beta_6 * \ln(employees) + \beta_7 * auditor\ reputation + \beta_8 * underwriter\ rank + \beta_9 * positive\ net\ income + \beta_{10} * prior\ industry\ experience$$

We then test the impact of founder transitions on the occurrence of litigation within three years after the IPO, using logistic regressions. In model 5, we examine how the possibility of litigation is influenced by the control variables; in model 6, we incorporate the three founder variables. The two models are presented below:

Model 5:

$$litigation = \alpha + \beta_1 * firm\ age + \beta_2 * nasdaq\ 30\ day\ return + \beta_3 * \ln(employees) + \beta_4 * auditor\ reputation + \beta_5 * underwriter\ rank + \beta_6 * positive\ net\ income + \beta_7 * prior\ industry\ experience$$

Model 6:

$$\text{litigation} = \alpha + \beta_1 * founder - leave + \beta_2 * founder - top + \beta_3 * founder - board + \beta_4 * firm\ age + \beta_5 * nasdaq\ 30\ day\ return + \beta_6 * \ln(employees) + \beta_7 * auditor\ reputation + \beta_8 * underwriter\ rank + \beta_9 * positive\ net\ income + \beta_{10} * prior\ industry\ experience$$

5.Results

5.1 Data description

As stated, the sample consists of 210 IPO firms in the service industry that went public on the NASDAQ Exchange between 2000 and 2012. Table 1 shows that the average firm age is 11.11 years, the average number of employees is 1553, and the average IPO valuation is $197.27 million. In the long run, the IPOs in the sample have a three-year delisting failure rate of 10.48% and a three-year litigation rate of 20%.

Table 2 presents the distribution of all IPOs, as well as the subsample of sued IPOs across the years. This demonstrates that the IPO volume is highest in 2000 with 43 IPOs, and hit its lowest level in 2003 and 2008 with 7 IPOs separately. There are also 12 IPO firms that went public in 2000 that were subsequently sued.

Table 3 provides more detailed information regarding the lawsuits filed against the sample firms. Panel A describes the nature of the primary alleged fraud in each complaint. The majority of suits alleged “misleading or false statements”; it seems that in 2001/2002, there was a wave of IPO laddering litigations. A large proportion of all sued firms were accused of misrepresenting

their financial condition, engaging in improper earnings recognition, using inappropriate accounting practices or violating GAAP standards, or overstating their financial performance.

Panel B of Table 3 gives details of the outcome of the sample lawsuits. 24 of the 42 lawsuits in the sample were settled, 13 were dismissed, and 5 are still pending as of March 2016.

5.2 Regression results for IPO valuation

Using the OLS regression to examine the effect on IPO valuation, Table 4 shows a positive and significant coefficient for the *founder-leave* variable and suggests that replacing a founder-CEO with a non-founder-CEO before the IPO will lead to a higher IPO valuation compared to retaining the founder as CEO, controlling for other factors. This result is consistent with Hypothesis 1. We do not observe the significance of the variables *founder-top* and *founder-board*, which means that there is no significant correlation with the IPO valuation, whether the founder moves to the top management team as a non-CEO member or gravitates to the board. Therefore, we do not find support for Hypotheses 2 and 3.

From Table 4, we can also find that there is a significant and positive coefficient for the variables *ln (employees)*, *underwriter rank*, and *positive net income*. We conclude that the firm size, the underwriter reputation, and the net profit in the year before the IPO are significantly positive when related to the firm's IPO valuation. These results are consistent with the hypotheses. In addition, the coefficient of the variable firm size is significantly negative, which means that the younger the firm, the higher the IPO valuation.

5.3 Logistic regression results for IPO firm delisting

Using the logistics regression to examine the effect on the delisting failure, Table 5 shows a negative and significant coefficient for the *founder-leave* variable and suggests that keeping the founder as CEO is associated with a higher delisting failure rate, compared to having the founder leave the firm. In addition, the negative and significant coefficient for the *founder-top* variable suggests that having the founder remain as a non-CEO member of the top management team is associated with a lower delisting failure rate, compared to having the founder remain as CEO.

These conclusions are consistent with Hypotheses 4 and 5. We do not find significance for the variable *founder-board*, which means that merely having the founder serve on the board is not significantly different from retaining the founder as CEO. Therefore, there is no support for Hypothesis 6.

In Table 5, we can see a significant and positive coefficient for the following variables: *firm age*, and *underwriter rank*. We can conclude that the younger the firm, the lower the IPO firm delisting rate. The smaller the underwriter reputation, the lower the IPO firm delisting rate.

5.4 Logistic regression results for IPO firm litigation

Using the logistics regression to examine the effect on delisting failure, Table 6 provides the negative and significant coefficient for the *founder-top* variable and suggests that having the founder remain as a non-CEO member of the top management team is associated with a lower litigation rate than having the founder remain as CEO. The negative and significant coefficient for the *founder-board* variable further suggests that only having the founder on the board is associated with a lower litigation rate than if the founder remains as CEO. These results are consistent with Hypotheses 8 and 9. We do not observe a significant result for the *founder-leave* variable, so there is no evidence to support Hypothesis 7.

6. Robustness Tests

6.1 Regression results (sample 2000-05 vs. sample 2006-12)

For the robustness tests, we divide the sample firms into two groups: 108 firms from 2000-05, and 102 from 2006-12, as mentioned earlier. We analyze the influences of founder transitions on IPO valuation, delisting failure rate, and litigation rate of firms within three years after the IPO by using the same models and testing these two groups separately.

Tables 7, 8, and 9 show the respective subsample tests results. Despite no significant results for IPO valuation and litigation rate being found for sample 2006-12, most are similar to those for sample 2000-05. In addition, we do observe a significant positive relation between *founder-top*

variable and IPO valuation in sample 2000-05, which is consistent with Hypothesis 2. In sample 2006-12, *founder-leave* variable is significantly negative related to delisting failure rate, and in sample 2000-05, founder-top variable is significantly negative associated with delisting failure rate as well.

6.2 Regression results (non-accounting-related fraud vs. accounting-related fraud)

In Table 3, we can see that a significant portion of the lawsuits in the sample alleged that the companies had misleading or false statements, laid out over-optimistic forecasts, or failed to disclose existing business problems. Such claims are obviously different from cases that allege accounting fraud. However, we do not know whether the top executives intentionally hid problems and made over-optimistic forecasts, or were simply unable to grasp the business problems and were over-confident about their firm's future. Therefore, we divide the sample of lawsuits into two groups: accounting-related and non-accounting-related. Among all 42 lawsuits, there are 20 accounting allegations and 22 non-accounting allegations, and we use 20 out of 188 firms to run the logistic regression on accounting allegations and 20 out of 190 firms to run the logistic regression on non-accounting allegations.

Table 10 reports the results of the respective subsample tests. We find that the variable *founder-board* is significantly negatively related to the possibility of facing accounting-related lawsuits for firms within three years after IPO. In addition, the variable *founder-top* is significantly negatively associated with the possibility of facing non-accounting-related cases for firms within three years after IPO. The results suggest that moving the founder to the board, rather than having them remain as CEO, tends to reduce the chance of accounting-related lawsuits, and that having the founder take a non-CEO role in the top management team could lower the possibility of non-accounting-related cases for firms within three years after IPO.

6.3 Regression results (non-laddering lawsuits)

From Table 3, it is clear that a large proportion of the lawsuits in the sample are laddering cases. In the 2001/02 wave of IPO laddering litigations, instead of the issuers, these IPOs' underwriters were alleged to be the principal wrongdoers. However, compared to other allegation types, the laddering lawsuit has less to do with the IPO in terms of the firm, the founder, or the CEO.

Therefore, we exclude the sample of laddering schemes. Among all 42 lawsuits, there are 11 laddering and 31 non-laddering lawsuits; we use 31 out of 199 firms to run the logistic regression.

Table 11 tells us that the variable *founder-board* is significantly negatively related to the possibility of firms facing non-laddering lawsuits within three years after IPO, which means that having the founder on the board is associated with a lower non-laddering litigation rate compared to retaining the founder as CEO.

6.4 Regression results (non-dismissed cases vs. dismissed cases)

In panel B of Table 3, we can see that among all 42 cases, 13 were dismissed, 24 were settled and 5 are still pending. To further examine the impact of founder transitions on litigations after the IPO, we divide the sample of lawsuits into two groups: dismissed cases vs. non-dismissed cases. We run subsample tests by using 13 out of 181 firms to run the logistic regression on dismissed cases and 29 out of 197 firms to run the logistic regression on non-dismissed cases.

Table 12 reports the result of the respective subsample tests. It suggests that the variable *founder-top* is significantly negatively related to the possibility of facing non-dismissed cases and that the variable *founder-board* is significantly negatively associated with the dismissed litigation rate. We can see that rather than retaining the founder as CEO, having the founder adopt a non-CEO role in the top management team tends to reduce the chance of facing non-dismissed cases, while moving the founder to the board could lead to a lower possibility of firms facing dismissed cases within three years after IPO.

7.Conclusions

In this paper, we examine whether founder transition has an impact on the following three aspects: IPO valuation, firm delisting rate within three years after IPO, and the likelihood of firms being sued within three years after IPO.

Focusing on IPO firms in the service industry on the NASDAQ Exchange during the period 2000-12, we collect 210 firms and divide them into two subsamples: 108 firms from 2000-05 and

102 from 2006-12. To be specific, we also explore the sued IPO firms, and divide them into subsamples such as accounting-related vs. non-accounting-related fraud, laddering vs. non-laddering cases, and dismissed vs. non-dismissed lawsuits.

We then apply an analysis of OLS regression on the IPO valuation. We find that replacing a founder-CEO with a non-founder-CEO before the IPO leads to a higher IPO valuation than if the founder remains as CEO. Next, we run logistic regression on the delisting rate. The results confirm that both replacing a founder-CEO with a non-founder-CEO, and having the founder take a non-CEO role in the top management team before the IPO, leads to a lower delisting possibility within three years after IPO, compared to letting the founder remain as CEO. Finally, using logistic regression, we test the founder transition's impact on the likelihood of being sued. We find that either having the founder assume a non-CEO role in the top management team, or moving them to the board, are associated with a lower likelihood of firms being sued within three years post-IPO, compared to retaining the founder as CEO.

For the robustness test, despite finding no statistically significant results, most results for the 2006-12 samples are similar to those for the 2000-05 sample. In addition, having the founder on the board rather than as CEO tends to reduce the chance of accounting-related lawsuits, non-laddering cases, and dismissed litigations for firms within three years after IPO. Having the founder take a non-CEO role in the top management team could lead to a lower risk of non-accounting-related cases and non-dismissed lawsuits within three years after IPO.

Overall, the results from this paper indicate that replacing the founder-CEO with a non-founder-CEO before the IPO leads to a higher IPO valuation, compared to retaining the founder as CEO. In addition, as long as the founder is not retained as CEO, either by going to the top management team or by taking a position on the board, would lower the chance of their firm being delisted or sued within three years after IPO.

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Appendix

Table 1. Descriptive Statistics

This table summarizes the characteristics for the whole sample. The mean and median values for variable IPO valuation, firm age, number of employees, and underwriter rank are reported. The mean values of the dependent variables, delisting failure and litigation, indicate that the IPOs in the sample had a three-year delisting failure rate of 10.48% and a three-year litigation rate of 20% in the long run.

Panel A: Sample Selection

Database	SDC (Nasdaq Exchange 2000-2012)	SIC code (7000-8999)	EDGAR of SEC (s-1 filing)	CRSP (delisting)	Stanford University's Securities Class Action Clearinghouse (http://securities.stanford.edu)
Number of sample	1089	218	210	22	42

Panel B: Sample Characteristics

	Founder-leave		Founder-top		Founder-board		Total	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median
IPO valuation (million)	$196.84	$78	$197.84	$77.95	$199.65	$77.95	$197.27	$78.72
Firm age (year)	11.27	9	11.17	9	11.13	9	11.11	9
Number of employees	1566.51	374	1575.33	369.5	1548.10	372	1553.39	372
Underwriter rank (0-9)	7.90	9	7.92	9	7.92	9	7.93	9
Delisting failure rate	10.73%	0	10.68%	0	10.68%	0	10.48%	0
Litigation rate	20.49%	0	20.39%	0	20.39%	0	20%	0

N = 210

Table 2. Sample Distribution across Years

The sample consists of 210 IPO firms that went public on the NASDAQ Exchange between 2000 and 2012 and that are listed in the Securities Data Company (SDC) database in the service industry (SIC codes 7000 to 8999). Sued firms are identified through Stanford University's Securities Class Action Clearinghouse (http://securities.stanford.edu) and the Securities Class Action Alert (SCAA). We consider lawsuits that were filed against the issuing firms within three years of their IPO date under Section 11 of the 1993 Securities Act. Laddering cases filed against the underwriters, in which issuers are named as co-defendants, are also included. Table 2 provides a summary of statistics on the number of IPOs and the proportion of sued IPO firms by year.

Number of IPOs (2000-2012)

IPO year	No. of IPOs	Number of IPOs sued under Section 11	% of IPOs sued under Section 11
2000	43	12	27.91
2001	13	3	23.08
2002	14	2	14.29
2003	7	0	0.00
2004	16	1	6.25
2005	15	4	26.67
2006	18	3	16.67
2007	11	4	36.36
2008	7	1	14.29
2009	14	2	14.29
2010	18	4	22.22
2011	19	5	26.32
2012	15	1	6.67
Total	210	42	20.00

Table 3. Nature and Outcome of Lawsuits

his table provides a summary of statistics for the IPO litigation sample. In Panel A, we identify the nature of lawsuits using the case summary for each lawsuit as provided by Stanford University's Securities Class Action Clearinghouse (SCAC) (http://securities.stanford.edu). Considering that some lawsuits involve multiple allegations, the number of allegations (51) exceeds the number of lawsuits (42) in the sample. Panel B provides information on the outcomes of these lawsuits as of February 2016. We search the SCAC, the Securities Class Action Alert (SCAA), and the Department of Justice Public Access to Court Electronic Records (PACER) (http:// www. pacer.gov) database to determine how each lawsuit was resolved.

Panel A: Nature of Allegation

Nature of legal claim	Number of cases	Percentage of total
Laddering schemes	12	28.57
Insider trading	2	4.76
False or misleading statements made at IPO	3	7.14
Improper accounting practices, violations of GAAP	1	2.38
Improper revenue recognition + improper sales practices	3	7.14
False (overoptimistic) forecasts	3	7.14
False financial results (overstatement of financial performance)	4	9.52
Failure to disclose existing business problems	3	7.14
Misleading or false statements (general)	14	33.33
False statements regarding business + operations	4	9.52
Improper registration of securities with SEC + other "formalities"	2	4.76
Total	51	121.43

Panel B: Outcome of the lawsuits

	Number of cases
Settled	24
Dismissed	13
Pending	5
Total	42

Table 4. OLS Regression Results for IPO Valuation

This table presents the impacts of founder transition on IPO valuation. We calculate Ln (valuation) by computing a natural log of the raised capital amount, which is the number of shares multiplied by offering price. The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size, gained by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" represents that the auditing firm is one of the Big 4 audit firms and "0" is used for non-Big 4 firms. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable about CEO, where "1" represents that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

OLS Regression

	Dependent Variable: Ln (Valuation)			
Variable	Model 1 ---- Controls		Model 2 ----- Founder Status	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	15.36***	0.0001	15.29***	0.0001
Firm age	-0.01**	0.0133	-0.02***	0.0022
NASDAQ 30-day return	0.72	0.2516	0.49	0.4440
Ln (employees)	0.42***	0.0001	0.45***	0.0001
Auditor reputation	0.05	0.7046	0.06	0.6332
Underwriter rank	0.25***	0.0001	0.24***	0.0001
Positive net income	0.22**	0.0458	0.22**	0.0479
Prior industry experience	-0.21	0.5462	-0.18	0.6103
Founder-leave			0.31*	0.0645
Founder-top			0.09	0.5665
Founder-board			-0.02	0.9025
Adjusted R^2	0.3353		0.3384	
F Value	16.06***	0.0001	11.69***	0.0001

N=210

Table 5. Logistic Regression Results for IPO Firm Delisting

This table presents the impacts of founder transition on IPO firm delisting. Delisting is a dummy variable that equals "1" if a firm is delisted for failing to achieve SEC or stock exchange requirements or being acquired by another firm at a price which was 75% or more below its IPO valuation; otherwise, "0" is used. The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size, gained by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" denotes that the auditing firm is one of the Big 4 audit firms; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable for the CEO, where "1" represents that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Logistic Regression

Variable	Dependent Variable: Delisting			
	Model 3 ---- Controls		Model 4 ---- Founder Status	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	12.08	0.9812	13.72	0.9856
Firm age	0.03	0.4007	0.08*	0.0545
NASDAQ 30-day return	-4.39	0.1625	-2.43	0.4688
Ln (employees)	-0.37	0.4154	-0.85	0.1142
Auditor reputation	-0.56	0.3903	-0.78	0.2662
Underwriter rank	0.44***	0.0028	0.58***	0.0008
Positive net income	0.53	0.2902	0.60	0.2752
Prior industry experience	-12.30	0.9809	-13.36	0.9859
Founder-leave			-2.34***	0.0022
Founder-top			-1.39**	0.0339
Founder-board			0.24	0.7842
Chi^2 Statistic	15.0001**	0.0360	28.0136***	0.0018
Pseudo R^2	0.1065		0.1988	

N=210

Table 6. Logistic Regression Results for IPO Firm Litigation

This table presents the impacts of founder transition on IPO firm litigation. The variable litigation is "1" if the firm faces a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, the value is "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. I identified the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size formulated by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" represents that the auditing firm is one of the Big 4; "0" is used for non-Big 4 firms. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, wherein "1" indicates a firm that reported a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable regarding the CEO, where "1" denotes that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

	Logistic Regression			
	Dependent Variable: Litigation			
Variable	Model 5 ---- Controls		Model 6 ---- Founder Status	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	16.58	0.9808	17.43	0.9797
Firm age	0.00	0.8542	0.01	0.5613
NASDAQ 30-day return	-1.58	0.4475	-1.53	0.4788
Ln (employees)	0.01	0.9705	-0.16	0.6639
Auditor reputation	0.34	0.4355	0.33	0.4545
Underwriter rank	-0.27*	0.0616	-0.24	0.1139
Positive net income	0.01	0.9885	0.05	0.9007
Prior industry experience	-13.32	0.9845	-13.69	0.9841
Founder-leave			-0.69	0.2172
Founder-top			-0.82*	0.0968
Founder-board			-0.90**	0.0484
Chi^2 Statistic	7.0629	0.4224	12.5542	0.2497
Pseudo R^2	0.0336		0.059	

N=210

Table 7. Robustness Test Results for IPO Valuation

This table presents the impacts of founder transition on IPO valuation by testing subsamples. There are 108 firms in the sample from 2000-05 and 102 from 2006-12. We calculate Ln (valuation) by computing a natural log of the raised capital amount, which is number of shares multiplied by offering price. The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size found by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" shows that the auditing firm is one of the Big 4; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable of CEOs, where "1" represents that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". In addition, we include a dummy variable that identifies recessionary periods (i.e. March 2001-November 2001 and December 2007 - June 2009) based on the definition provided by the National Bureau of Economic Research (2007) (Report entitled, "Business Cycle Expansions and Contractions", http://www.nber.org/cycles.html) and on data provided by the Bureau of Economic Analysis (http://www.bea.gov/national/xls/gdpchg.xls). The symbols *, ** and, *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Ln (Valuation)			
	Sample 2000-2005		Sample 2006-2012	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	15.75***	0.0001	14.93***	0.0001
Firm age	-0.01*	0.0963	-0.02*	0.0725
NASDAQ 30-day return	1.22*	0.0620	-2.58*	0.0908
Ln (employees)	0.37***	0.0064	0.50***	0.0019
Auditor reputation	-0.05	0.7293	0.15	0.5238
Underwriter rank	0.19***	0.0001	0.27***	0.0001
Positive net income	0.27*	0.0564	0.15	0.3601
Prior industry experience	-0.13	0.6933	-0.09	0.6284
Recession period	-0.20	0.5295	-0.22	0.3787
Founder-leave	0.21	0.3867	0.30	0.2015
Founder-top	0.30*	0.0935	-0.23	0.4333

Robustness Test				
Founder-board	0.24	0.15573	-0.36	0.1891
Adjusted R^2	0.2902		0.4031	
F Value	4.98***	0.0001	7.82***	0.0001
Number of Observation	108		102	

Table 8. Robustness Test Results for IPO Firm Delisting

This table presents the impacts of founder transition on IPO firms being delisted, by testing subsamples. There are 108 firms in the sample from 2000-05 and 102 from 2006-12. Delisting is a dummy variable that equals "1" if a firm is delisted for failing to achieve SEC or stock exchange requirements or being acquired by another firm at a price which is 75% or more below its IPO valuation; otherwise, it equals "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size discovered by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" indicates that the auditing firm is one of the Big 4; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable for CEOs, where "1" means that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". In addition, we include a dummy variable that identifies recessionary periods (i.e. March 2001- November 2001 and December 2007 - June 2009) based on the definition provided by the National Bureau of Economic Research (2007) (Report entitled, "Business Cycle Expansions and Contractions", https://web.archive.org/web/20071012231548/http://www.nber.org/cycles.html) and on data provided by the Bureau of Economic Analysis (http://www.bea.gov/national/xls/gdpchg.xls). The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Delisting			
	Sample 2000-05		Sample 2006-12	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	11.71	0.9830	-1.23	0.5378
Firm age	0.14	0.1447	0.10	0.1094
NASDAQ 30-day return	-3.24	0.4573	-3.50	0.6213
Ln (employees)	-2.25**	0.0479	-0.71	0.3435
Auditor reputation	0.68	0.5200	-3.44*	0.0870
Underwriter rank	0.59	0.1003	1.06***	0.0097
Positive net income	2.54*	0.0658	0.11	0.8868
Prior industry experience	-9.22	0.9866	-11.09	0.9723
Recession period	9,79	0.9831	-0.69	0.4417
Founder-leave	-2.23	0.2139	-2.80***	0.0095

	Robustness Test			
Founder-top	-1.97*	0.0951	-1.46	0.2278
Founder-board	10.99	0.9568	-1.81	0.1750
Chi^2 Statistic	20.4371**	0.0397	26.3799***	0.0033
Pseudo R^2	0.3583		0.3233	
Number of Observation	108		102	

Table 9. Robustness Test Results for IPO Firm Litigation

This table presents the impacts of founder transition on IPO firm litigation by testing subsamples: sample 2000-05 vs. sample 2006-12. There are 108 firms in sample 2000-05 and 102 in sample 2006-12. The variable litigation is "1" if the firm faces a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, it is "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. I identified the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size inferred by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" demonstrates that the auditing firm is one of the Big 4, while "0" was used for non-Big 4 companies. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous CEO variable, where "1" represents that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". In addition, we include a dummy variable that identifies recessionary periods (i.e. March 2001- November 2001 and December 2007 - June 2009) based on the definition provided by the National Bureau of Economic Research (2007) (Report entitled, "Business Cycle Expansions and Contractions", https://web.archive.org/web/20071012231548/http://www.nber.org/cycles.html) and on data provided by the Bureau of Economic Analysis (http://www.bea.gov/national/xls/gdpchg.xls). The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Litigation			
	Sample 2000-2005		Sample 2006-2012	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	20.65	0.9525	2.23	0.1569
Firm age	0.01	0.8305	-0.02	0.5932
NASDAQ 30-day return	-2.09	0.4337	0.16	0.9730
Ln (employees)	-0.49	0.4207	-0.24	0.6201
Auditor reputation	0.71	0.2640	-0.30	0.6943
Underwriter rank	-0.69**	0.0407	0.09	0.6822
Positive net income	0.65	0.3087	-0.44	0.049
Prior industry experience	-12.58	0.9711	-14.03	0.9872
Recession period	-0.38	0.7668	0.14	0.8609
Founder-leave	0.63	0.6257	-0.62	0.3676

		Robustness Test		
Founder-top	-1.42**	0.0404	0.92	0.4401
Founder-board	-1.04*	0.1024	-0.58	0.4705
Chi^2 Statistic	20.9350**	0.0341	4.8017	0.9040
Pseudo R^2	0.1917		0.0476	
Number of Observation	108		102	

Table 10. Regression Results for IPO Firm Litigation (Non-Accounting-Related Fraud Vs. Accounting-Related Fraud)

This table presents the impacts of founder transition on IPO firm litigation by testing subsamples: sample non-accounting-related fraud vs. sample accounting-related fraud. Among all 42 lawsuits, there are 20 accounting allegations and 22 non-accounting allegations, and we use 20 out of 188 firms to run the logistic regression on accounting-related allegations, and 22 out of 190 firms to run the logistic regression on non-accounting allegations. The variable litigation is "1" if the firm faces a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, it is "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size determined by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" denotes that the auditing firm is one of the Big 4 audit firms; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable regarding CEOs, where "1" indicates that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Litigation			
	Non-Accounting-Related Lawsuits		Accounting-Related Lawsuits	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	15.84	0.9761	18.29	0.9704
Firm age	0.03	0.4094	-0.01	0.7572
NASDAQ 30-day return	-6.68**	0.0463	3.16	0.2659
Ln (employees)	-0.21	0.6688	-0.03	0.9447
Auditor reputation	0.09	0.8768	0.37	0.5408
Underwriter rank	-0.10	0.5742	-0.42	0.1196
Positive net income	0.03	0.9313	-0.03	0.9558
Prior industry experience	-12.16	0.9817	-12.32	0.9800
Founder-leave	-0.93	0.1797	-0.33	0.7024
Founder-top	-1.40**	0.0152	0.74	0.4983
Founder-board	0.28	0.7322	-1.49***	0.0081

Chi^2 Statistic	15.5833	0.1122	16.8664*	0.0774
Pseudo R^2	0.1144		0.1324	
Number of Observation	190		188	

Table 11. Regression Results for IPO Firm Litigation (Non-Laddering Lawsuits)

This table presents the impacts of founder transition on IPO firm litigation by testing the subsample: non-laddering lawsuits. Among all 42 lawsuits, there are 11 laddering and 31 non-laddering lawsuits; we use 31 out of 199 firms to run the logistic regression. The variable litigation is "1" if the firm faces a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, it is "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. We identify the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size reached by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" denotes that the auditing firm is one of the Big 4 firms; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable for CEOs, where "1" demonstrates that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Litigation	
	Non-Laddering Lawsuits	
	Parameter Estimate	P Value
Intercept	17.17	0.9708
Firm age	0.00	0.9986
NASDAQ 30-day return	1.31	0.5781
Ln (employees)	-0.26	0.5016
Auditor reputation	0.01	0.9790
Underwriter rank	-0.21	0.2423
Positive net income	-0.29	0.4935
Prior industry experience	-12.73	0.9784
Founder-leave	-0.59	0.3254
Founder-top	-0.62	0.4382
Founder-board	-0.84*	0.0846
Chi^2 Statistic	11.3309	0.3323
Pseudo R^2	0.0658	

N=199

Table 12. Regression Results for IPO Firm Litigation (Non-Dismissed Cases Vs. Dismissed Cases)

This table presents the impacts of founder transition on IPO firm litigation by testing the subsamples: sample non-dismissed cases vs. sample non-dismissed cases. Among all 42 cases, 13 were dismissed, 24 were settled, and 5 are still pending. We run subsample tests using 13 out of 181 firms to run the logistic regression on dismissed cases, and 29 out of 197 firms to run the logistic regression on non-dismissed cases. The variable litigation is "1" if the firm faces a securities class action lawsuit under Section 11 of the 1933 Securities Act within three years of their IPO; otherwise, it is "0". The founder-leave variable is a dummy variable, where "1" denotes that the firm is managed by a non-founder-CEO and that the founder is no longer associated with the firm in any way. I identified the founder-top variable as a dichotomous measure, where "1" means that the original founder-CEO stays in the firm and assumes a non-CEO position in the top management team. The founder-board variable is a dummy variable, where "1" indicates that the former founder-CEO stays with the firm and becomes a member of the board, but is not in the top management team and is no longer a CEO. We measure NASDAQ 30-days return as a percentage return on the NASDAQ index during the 30 days prior to the IPO. Ln (employees) is a measure of firm size garnered by calculating the natural log of the number of employees at the time of IPO. Auditor reputation is a dichotomous variable, where "1" tells us that the auditing firm is one of the Big 4; otherwise, "0" is used. Underwriters are ranked from 0 to 9 by prestige values. Net positive income is a dummy variable and a measure of profitability, where "1" indicates a firm that reports a net profit in the year before the IPO; otherwise, the value is "0". Prior industry experience is a dichotomous variable of CEOs, where "1" denotes that the CEO has management experience in other firms in the same industry as the IPO firm; otherwise, the value is "0". The symbols *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels.

Robustness Test

Variable	Dependent Variable: Litigation			
	Non-Dismissed Cases		Dismissed Cases	
	Parameter Estimate	P Value	Parameter Estimate	P Value
Intercept	15.51	0.9737	19.52	0.9751
Firm age	0.03	0.3245	-0.01	0.6983
NASDAQ 30-day return	-1.84	0.4645	-0.35	0.9253
Ln (employees)	-0.08	0.8456	-0.45	0.4625
Auditor reputation	0.52	0.2894	-0.07	0.9405
Underwriter rank	-0.26	0.1302	-0.14	0.6171
Positive net income	0.32	0.4624	-0.61	0.3552
Prior industry experience	-12.00	0.9796	-13.07	0.9833
Founder-leave	-0.53	0.4161	-1.16	0.2399
Founder-top	-0.91*	0.0845	0.11	0.9268
Founder-board	-0.16	0.7802	-2.19***	0.0049

	Robustness Test			
Chi^2 Statistic	10.9486	0.3615	14.7109	0.1430
Pseudo R^2	0.0665		0.1573	
Number of Observation	197		181	