Factors influencing the choice between founder versus non-founder CEOs for IPO firms

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Abstract

Despite the innate advantage founder CEOs have by virtue of their founding vision, organizational influence, positive image, and ownership stakes to lead their firms at their initial public offering (IPO), extant empirical evidence indicates that between a third to half of IPO firms go public with non-founder CEOs at the helm. Relatively little however, is known regarding factors that influence the choice of founder versus non-founder CEO for firms issuing IPOs. This study examines the impact of factors such as founder characteristics, size of founding team, governance structure, ownership structure, top management team independence, venture capitalist influence, and the demand for equity financing on the probability of founder CEO at IPO.

Keywords: Initial public offerings; Founder CEOs; Venture capital involvement; Governance structure

1. Executive summary

An initial public offering (IPO) represents an important milestone in the evolution of an entrepreneurial firm as it progresses from a start-up to a public corporation. It also represents a major accomplishment for the founder(s) and a testament to their founding vision, creativity, strategic direction, and managerial skills in developing a firm from the concept stage to a public company. In preparing for an IPO, a critical decision facing the
firm is whether the founder should continue as the CEO during its transition to a public company or step aside in favor of a seasoned professional with experience in leading a public company. Since extant evidence has suggested that the decision-making behavior, motivation, strategic choices, and performance of founder CEOs tend to differ from that of non-founder CEOs, the choice of founder versus non-founder CEO at IPO can be viewed, within the context of signaling theory, as a potentially informative signal of the likely strategic direction, growth strategy, investment and financial policy choices, and performance of the firm during the post-IPO period. Further, since the ability of the firm to survive and grow during the post-IPO period is largely determined by the strategic choices made around the time of going public, the choice of founder versus non-founder CEO at IPO is of vital importance to market participants such as investment bankers, venture capitalists, institutional/retail investors, and analysts.

Arguments based on the life cycle theory suggest that as entrepreneurial firms evolve and grow, managerial styles and capabilities must change as the focus shifts from viability and survival to challenges associated with managing complex organizational systems. It is however, an open question as to whether founder CEOs who have successfully managed the founding process have the necessary skills, experience, and credibility to adapt and lead the firm through a fundamentally different phase in its evolution. This study attempts to assess the impact of factors such as founder characteristics, size of the founding team, governance structure, ownership structure, top management team independence, demand for equity financing, and extent of venture capitalist influence on the likelihood of founder CEO at IPO.

We find that founder functional background is significantly related to the probability of founder CEO at IPO. Founders with output-based functional backgrounds are significantly more likely to assume the CEO position at IPO compared to founders with throughput-based functional backgrounds. Focusing on individual functional tracks, our results suggest that founders with career experience in product R&D are more likely to retain the CEO position at IPO relative to founders with experience in other functional tracks. Further, we find a negative relationship between founder age and probability of founder CEO at IPO. Since age is a proxy for risk and effort aversion, our results suggest that IPO investors seek low risk and effort aversion from CEO candidates.

We also examine the relation between size of founding team and the probability of founder CEO at IPO. Extant evidence indicates that founding teams are structured so as to provide for diverse and complementary skills and experiences that are likely to be required by the firm. We find that the probability of founder CEO at IPO is positively related to the size of the founding team. Our results are therefore consistent with the notion that larger founding teams increase the bargaining power of founder CEOs as well as provide firms with a deeper bench of individuals who can assume the CEO position at IPO.

Since selecting the CEO is the purview of the board of directors, the governance and ownership structure of the firm are likely to be important determinants of the probability of founder CEO at IPO. Our results indicate that the probability of founder CEO at IPO is positively related to the proportion of insiders on the board of directors. Further, our results suggest that the probability of founder CEO at IPO decreases with the increase in the independence of the top management team. Overall, our results suggest that board independence whether as a result of larger outside director presence or higher top management
team ownership leads to lower probability of founder CEO at IPO. In addition, higher outside blockholder ownership also lowers the probability of founder CEO at IPO. Finally, we find that it is not the presence or absence of venture capital involvement but rather the extent of influence exerted by them that is significantly related to the probability of founder CEO at IPO. We find that increased venture capitalist influence as measured by the extent of their presence on the board is associated with a lower probability of founder CEO at IPO.

2. Introduction

The question of whether a founder versus an outsider should assume the Chief Executive Officer (CEO) position of an entrepreneurial firm during its transition from private to public ownership is of considerable interest to investment bankers, venture capitalists, and potential investors of firms planning an initial public offering (IPO). There are many instances of firms such as Microsoft, Dell, and Siebel Systems that went public with founder CEOs at the helm and evolved into highly successful public corporations. On the other hand, it is not unusual for firms planning an IPO to replace their founder CEOs with a professional successor prior to the IPO thereby triggering the first CEO succession event in the history of the organization. In a study of founder CEO succession for early stage Internet firms, Wasserman (2003) found that the attainment of corporate milestones such as completion of product development and raising capital from outside investors tended to trigger founder CEO succession.

Arguments based on the life cycle theory suggest that as entrepreneurial firms evolve and grow, managerial styles and capabilities must change as the focus shifts from viability and survival to challenges associated with managing complex organizational systems (Boeker and Karichalil, 2002; Rubenson and Gupta, 1996; Tushman and Romanelli, 1985). Growth companies eventually reach a stage in their evolution where a centralized decision-making approach and level of complexity require a change in leadership (Greiner, 1972). Navigating a firm through the process of preparing for an IPO and then successfully managing it during the post-IPO phase represents a challenging task for CEOs of issuing firms, requiring specific skills, knowledge, experience, and social networks that are fundamentally different from those required during the founding phase. The transition to a public corporation exposes IPO firms to a new set of challenges that arise as a result of changes in the ownership and governance structure, increased market monitoring, exposure to the market for corporate control, and pressure to meet analyst expectations. Founders may not be prepared or able to develop competencies required to meet these fundamentally new challenges since few individuals possess all the skills needed to grow a business from inception to a state of maturity requiring management of complex organizational architectures (Stevenson and Jarillo, 1990). It is, therefore, an open question as to whether the founder who successfully piloted the firm during its founding phase is best suited to lead the firm through a fundamentally different phase in its evolution, as is the case with an IPO.

Research on founder led firms has generally argued that the decision-making processes, investment choices, governance structure, ownership structure, firm behavior, and

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2 The IPO of Google Inc. is a case in point. Prior to the IPO, the founder CEO stepped down in favor of Eric Schmidt, a seasoned professional with over twenty years experience in R&D, technology, and marketing.
consequently performance of founder led firms differs from that of non-founder led firms (Fahlenbrach, 2003; Jayaraman et al., 2000; Nelson, 2003). In the context of newly public firms, empirical evidence indicates that one third to half of IPO firms go public with founder CEOs and that founder led firms tend to receive higher valuations at the IPO compared to non-founder led firms (Certo et al., 2001; Nelson, 2003). This raises the obvious question as to why such a high proportion of IPO firms go public with non-founder CEOs? In a study of founder CEO succession in early stage Internet firms, Wasserman (2003) finds evidence to suggest that founder CEO departure is event driven and tends to occur around important milestones such as completion of product development or a new round of financing. However, relatively little is known regarding how a significant event such as an IPO influences founder CEO succession and therefore represents an important area of research (Wasserman, 2003).

The IPO market provides a unique setting to study factors influencing the choice of founder versus non-founder CEOs. Unlike a typical corporation where founder succession is usually triggered by death, retirement, or poor performance, the choice of founder versus non-founder CEO at IPO is made in the context of preparing for a major organizational transformation involving showcasing the firm to potential investors and analysts. It represents the first time that the firm faces intense scrutiny from regulators, investment bankers, analysts, institutional investors, and the financial community. As a consequence, the choice of founder versus non-founder CEO at the time of going public represents a significant decision made by the IPO firm and is likely to be interpreted by market participants as a potentially informative signal regarding the future strategic direction and performance of the firm.

To gain a better understanding of why founders cede the leadership role at the time of going public in companies created and nurtured by them, this study attempts to identify factors that influence the choice of founder CEO versus non-founder CEO for IPO issuing firms. Specifically, we evaluate whether factors such as founder characteristics, size of the founding team, governance structure, ownership structure, top management team independence, demand for equity financing, and the extent of influence exerted by venture capitalists are significantly related to the probability of founder CEO at IPO.

3. Theoretical background and hypotheses

During the process of preparing for an IPO, firms are subjected to a thorough due diligence process from investment bankers, auditors, lawyers, regulators, and institutional investors where all facets of the company are closely scrutinized. The inherent information asymmetry and uncertainty surrounding the prospects of IPO firms makes it even more likely that the choice of the CEO to lead the firm as a public corporation is closely scrutinized by various market participants as an indicator of the growth prospects and investment opportunities available to the firm during its post-IPO phase. In the context of signaling theory, the choice of founder versus non-founder CEO to lead the firm at the IPO can be viewed as an informative signal regarding the likely strategic direction and growth strategy of the firm.

The sociological perspective provides an alternative to signaling theory in providing a theoretical framework to identify factors that influence the choice between a founder versus
non-founder CEO for IPO firms. For instance, Davis (2005) argues that market participants are aware of the theories used by the stock market to evaluate companies and can accordingly adopt actions to package firms so as to play to investor preferences. Therefore, according to the sociological perspective, the choice of founder versus non-founder CEO for IPO firms is likely to be driven by the extent the characteristics and track record of the founder appeals to various investor groups so as to stimulate demand for the stock and consequently lead to higher valuations. In the discussion below, signaling theory and the sociological perspective provide the theoretical justification for the selection of factors that are hypothesized to influence the choice between founder versus non-founder CEOs for IPO issuing firms.

3.1. Founder functional background

Executives rise to the top management level from different functional backgrounds with their experience and training predominantly in certain functional areas. Experience in a specific functional track results in local perspectives that are distinctive to the function and tend to affect the strategic choices of decision-makers (Astley et al., 1982). While CEOs are presumed to have a generalist’s view, each brings to his or her job an orientation that has developed from experience in some primary functional area (Hambrick and Mason, 1984). In an attempt to classify the various functional tracks into broader functional categories, Hambrick and Mason (1984) made the distinction between output functions such as marketing/sales and product R&D and throughput functions such as production, accounting/finance and process engineering. Output functions emphasize growth, new ideas and opportunities, new products and services while throughput functions emphasize efficiency of the transformational process. As such, CEOs with career experiences in output functions would tend to focus on organizational innovation and growth while CEOs with throughput-based functional backgrounds may be better equipped to ensure internal and external stability (Finkelstein and Hambrick, 1996; Hambrick and Mason, 1984).

Organizational structure and stage of development provide an alternative to functional tracks in assessing the impact of prior executive experience and learning on their strategic choices and decision-making approach. For instance, Galbraith (1983) argued that the lessons learned by managers of upstream companies fundamentally differ from those learned by managers of downstream companies. While the mindset of the upstream manager is geared towards standardization and efficiency with a focus on process development and capital expenditures, the attention of downstream managers is on customization and innovation with a focus on product development, R&D, and marketing budgets (Galbraith, 1983). Therefore, there are close parallels in the nature of learning and decision-making focus of upstream and throughput managers and similarly between downstream and output managers.

In the context of firms going public, an interesting research question is whether the specific career experiences and functional background of founders’ influence their likelihood of leading the firm during the transition to a public corporation. Human capital theory indicates that direct work experience provides skills that are not easily obtained through other means (Carroll and Mosakowski, 1987). When executives possess skills that are in demand to meet the critical needs of their organizations they gain power (Kanter,
In addition, knowledgeable and sophisticated investors such as venture capitalists believe that founders’ experience is important to the success of new ventures (MacMillan et al., 1985; Riquelme and Richards, 1992). As such, the probability of founder CEO at IPO is likely to be higher when market participants perceive that their career experiences and functional background have adequately prepared them with the necessary knowledge, skills, and vision to effectively lead the firm as it transitions from private to public ownership.

Signaling theory in the context of the IPO market has argued that high quality issuing firms can undertake certain actions that can credibly signal their true value and avoid a potential market failure as a consequence of information asymmetry and the resulting adverse selection problem (Allen and Faulhaber, 1989; Welch, 1989). The functional background of the CEO selected to lead the firm at the IPO can therefore be a potentially informative signal of the likely growth strategy, investment decisions, and financial policy choices to be pursued by the firm during its post-IPO phase. CEOs with output-based functional backgrounds or from downstream companies are likely to be more credible in signaling a commitment to aggressively invest in R&D, product development, acquisitions, and other growth strategies during the post-IPO phase. On the other hand, CEOs with experiences in throughput-based functions or from upstream companies may have less credibility with potential investors in terms of their vision, ability, and commitment to adequately deploy resources to pursue aggressive growth strategies. Given the growth orientation of IPO investors, influential market participants such as investment bankers and venture capitalists may therefore persuade founder CEOs with throughput-based functional backgrounds to relinquish the CEO position prior to the IPO in favor of an outsider with experience and credibility in leading a growth company, thereby more effectively signaling the intent to aggressively pursue growth strategies during the post-IPO phase.

**Hypothesis 1.** The probability of founder CEO at IPO is higher for founders with career experiences in output-based functions.

### 3.2. Founder age

In evaluating candidates for CEOs, boards are likely to focus on individual traits such as risk tolerance, effort aversion, expected duration on job, and extent of human capital possessed (Joos et al., 2003). However, traits such as risk and effort aversion are not easily observable and are usually measured by proxies such as individual age. For instance, researchers have argued that older top managers compared to their younger counterparts are more risk averse, less likely to invest in growth strategies, and have greater difficulty grasping new ideas and learning new behaviors (Bantel and Jackson, 1989; Barker and Mueller, 2002; Child, 1974; Hambrick and Mason, 1984; Joos et al., 2003).

Since IPO issuing firms are likely to require high R&D and capital expenditures to pursue their growth options to remain competitive, the conservative and risk-averse strategic orientation of older CEOs may be detrimental to their performance. Extant studies have indicated that firms with substantial growth options hire younger CEOs thereby increasing the value of these options while larger, more complex firms choose older CEOs with more general management skills and human capital (Joos et al., 2003). As such, the
above discussion leads us to expect younger founders are more likely to assume the CEO position at the IPO compared to their older counterparts.

**Hypothesis 2.** The probability of founder CEO at IPO is negatively related to the age of the founder.

### 3.3. Size of founding team

In the context of IPO firms, the presence of a founding team instead of a sole founder can fundamentally alter the diversity and extent of expertise and resources available to the firm as well as the balance of power and dynamics of interaction between the founder CEO and various market participants. Founder CEOs of firms with multiple founders tend to be in a stronger bargaining position to negotiate terms of the IPO that are more favorable to the founding team. In addition, multiple founders increase the diversity of skills sets, expertise, and experience of the top management team, which further enhances the appeal of the firm to potential investors and helps attract top-tier investment banks to participate in the IPO underwriting syndicate.

Consistent with the above discussion, extant research suggests that founder CEOs may be able to retain their position for a longer period of time for firms with co-founders, particularly those with complementary skills (Wasserman, 2003). Founding teams can more effectively monitor the actions of the CEO, which in turn helps alleviate investor concerns regarding the potential for non-value maximizing decisions by founder CEOs. In addition, the presence of multiple founders can help pique the interest of the business media and potential investors and thereby lead to an increase in the extent of positive media coverage which is more credible than company provided information and helps systematically influence investor behavior (Pollock and Rindova, 2003). Therefore, on the basis of the above discussion, we expect the likelihood of founder CEO at IPO to be higher for firms with multiple founders.

**Hypothesis 3.** The probability of founder CEO at IPO is positively related to the size of the founding team.

### 3.4. Venture capital participation

In addition to providing capital, venture capitalists (henceforth, VCs) bring several additional resources to the table and can assist their portfolio companies in areas such as strategic and operational planning, personnel selection, supplier selection, marketing, human resource policy decisions, and investment and financing choices (Cyr et al., 2000; Fried and Hisrich, 1995; Gorman and Sahlman, 1989; Hellman and Puri, 2002; Jain and Kini, 1995; Kaplan and Stromberg, 2001; Sahlman, 1990). Therefore, during the post-investment phase, the various roles performed by VCs in their portfolio companies could be described as strategic, financial, disciplinary, interpersonal, networking oriented, and reputational in nature (De Clercq et al., 2006).

Due to their industry and product market expertise, and the nature of their repeated and on-going involvement in the IPO market, VCs are in a unique position to identify skills sets and career experiences required of CEOs to successfully navigate a firm through its IPO.
Since interactions with the CEO is the primary mechanism by which VCs receive information and conduct their monitoring activities, a major factor in receiving VC funding is the quality of the CEO (Fried and Hisrich, 1995). Therefore, when evaluating the initial decision to invest in a start-up, VCs tend to give significant weight to their assessment of the capabilities, career experiences, and track record of the founder CEO and their ability to provide leadership, strategic direction, and vision to the company as the firm evolves from a start-up to a public company. As such, VCs evaluate entrepreneurs based on aspects such as familiarity with managing the start-up process, relevant industry experience, and knowledge of cutting edge technology (De Clercq et al., 2006). The decision to invest in the firm is often dependent on the VCs’ assessment as to whether the founder CEO either has some of the above-described competencies or will be able to develop and acquire them over time.

The extant literature however, indicates that while managers may acquire new skills over time, fundamental changes in management style do not occur in response to the evolving needs and demands of the organization (Barrick and Mount, 1991). Further, as an entrepreneurial firm evolves from a start-up to a public corporation, the relative importance of demonstrating strategic versus operational skills tends to change. For instance, extant research indicates that strategic leadership skills are more highly valued than operational skills by VCs and their perceived lack of faith in the CEO’s strategic leadership skills and disagreements over the future direction of the company are more likely causes of CEO replacement than managerial opportunism (Bruton et al., 1997; Bruton et al., 2000; Fried and Hisrich, 1995). As such, when founders are perceived not to have the desired strategic skills, VCs are often a driving force in persuading the founder CEO to step down prior to the IPO in favor of more seasoned professionals with the necessary strategic vision, experience, and credibility to manage the IPO process and lead the firm as a public company. In other situations, VCs are forced to exercise their contractual covenants, ownership stakes, and influence on the board to replace founder CEOs with more suitable professional CEOs prior to the IPO.

**Hypothesis 4.** Venture capital participation reduces the probability of founder CEO at IPO.

It is possible however, that in some instances founder CEOs through their prior work experience develop the skills, knowledge, capabilities, track record, and credibility to be effective leaders of their organization both during the founding phase as well as during the transition to a public company. In such situations, VCs often find it advantageous to retain the founder CEO at IPO since their prestige, credibility, and track record would likely appeal to potential investors and analysts and thereby enhance valuations. Consistent with Davis’s (2005) sociological perspective argument that market participants take actions to package firms so as to be more attractive to investors, we argue that VCs are more likely to accept founders with output-based functional backgrounds as CEOs at IPO since they can more credibly sell a growth story to investors. Therefore, VC participation is likely to moderate the relationship between founder functional background and probability of founder CEO at IPO.

**Hypothesis 4A.** VC involvement moderates the relationship between founder functional background and the probability of founder CEO at IPO.
The mere presence or absence of venture capital investment by itself may not be sufficient to allow VCs to exert influence over important strategic, operational and personnel decisions. The extent of VC involvement in their portfolio companies differs on the basis of their ownership stakes, presence on the board of directors, and covenants negotiated in the term sheets. The above facets of their involvement to a large degree determine whether VCs are in a position to exert influence on managerial decisions versus being forced to play a more passive role. A strong presence on the board of directors of the IPO firm provides VCs with an effective platform to influence important strategic decisions related to the going public process and allows them to be more proactive in making changes to the top management team (Boeker and Wiltbank, 2005). Therefore, we expect that greater VC presence on the board of the IPO firm will be associated with a lower likelihood of founder CEO at IPO.

**Hypothesis 4B.** The probability of founder CEO at IPO is negatively related to the extent of VC influence on the board of the IPO firm.

### 3.5. Board composition

Board composition and extent of its independence represent a potentially important factor in founder CEO succession decisions (Wasserman, 2003). Extant research highlights the potential for founder CEOs relative to non-founder CEOs to be less objective regarding the prospects of their firm and demonstrate a tendency to make non-value maximizing decisions, often as a consequence of their desire to maintain control over resources and corporate affairs (Cooper et al., 1988; Jayaraman et al., 2000). Independent boards dominated by outsiders can more effectively monitor and control management and therefore are more likely to replace founder CEOs with outsiders prior to the IPO when there are concerns regarding the objectivity, motivation, and ability of founder CEOs to effectively lead the firm during the post-IPO phase.

On the other hand, while outsider dominated boards may be better equipped to execute monitoring and control functions, they are less likely to be effective in providing strategic guidance and direction in fast growing industries with new and evolving technologies and nascent product markets which characterize the situation facing many IPO issuers. In addition, Certo et al. (2001) suggest that control functions may be less important to IPO stage firms compared to mature firms. Insider dominated boards, on the other hand, while less independent may be in a better position to be more effective in providing strategic guidance and direction to the CEO. Researchers have argued that insiders on boards by virtue of their direct knowledge of the firm and its capabilities are in a unique position to serve as knowledgeable sounding boards in the formulation of company strategy and are more likely and better equipped to be more innovative and maintain a strategic outlook compared to outsiders (Baysinger and Hoskisson 1990; Zahra 1996). In addition, researchers have argued that a higher proportion of insiders on the board can alleviate concerns regarding objectivity and over-optimism on the part of founder CEOs and temper their potential biases through their ability to provide high quality firm specific information (Certo et al., 2001).

While insider dominated boards are in a better position to provide knowledgeable inputs and temper the tendency for over-optimism on the part of founder CEOs, they are likely to
be less effective in triggering a change in leadership as the firm progresses towards an IPO. Since inside board members are likely to have been handpicked by founder CEOs, they are expected to be less likely to seek founder CEO replacement relative to outside board members (Fiet et al., 1997). Further, the lack of independence of inside board members is likely to be exacerbated when their ownership stakes in the firm is low or insignificant. Therefore, on the basis of the above discussion, we would expect that the probability of founder CEO at IPO is likely to be higher for IPO firms with insider dominated boards.

**Hypothesis 5.** The probability of a founder CEO at IPO is positively related to proportion of insiders on the board.

### 3.6. Top management team independence

The extant literature on corporate governance has generally argued that the likelihood of CEO dismissal depends on the power of the CEO, which to a large extent is determined by the amount of equity held by top management (Fredrickson et al. 1988; Rubenson and Gupta, 1992). In the context of the IPO market, higher top management team (TMT) ownership increases their independence from the CEO and consequently their influence on decisions related to the going public process. Further, significant ownership stakes on the part of the TMT help align their incentives with other shareholders and makes it more likely that they would act to facilitate removal of the founder CEO if it becomes apparent that a more qualified outsider would improve the likelihood of a successful IPO. On the other hand, when TMT independence is low, founder CEOs hold the balance of power and are more likely to resist relinquishing the CEO position at the time of the IPO. Therefore, we predict a negative relationship between TMT independence and the probability of founder CEO at IPO.

**Hypothesis 6.** The probability of founder CEO at IPO is negatively related to the extent of TMT independence.

### 3.7. Demand for equity financing

One of the often-stated reasons for undertaking an IPO is to gain access to capital markets and raise capital to finance future growth. Investors are willing to supply capital to IPO issuing firms in the expectation that these firms will aggressively pursue investment opportunities after the IPO and deliver supernormal growth. The act of going public greatly enhances the menu of financing choices available to issuing firms and allows them access to both public debt and equity markets. As such, the IPO represents the first stage in raising capital and issuing firms are expected to tap capital markets more frequently after the IPO to finance their growth projects.

The considerable literature on capital structure choices suggests that firms make strategic capital structure decisions and the extent of leverage is related to factors such as profitability, taxes, default risk, size, growth opportunities, and collateral value (Berger et al., 1997; Rajan and Zingales, 1995; Shleifer and Vishny, 1992; Titman and Wessels, 1988). Since IPO issuing firms are usually smaller, less profitable, with stronger growth opportunities, and lower collateral value of assets relative to a typical seasoned firm, capital
structure theory and empirical evidence points to lower levels of leverage and greater reliance on equity financing by IPO firms compared to their seasoned counterparts (Eckbo and Norli, 2005). The preference for equity capital however, results in dilution of earnings and ownership and increases the probability of takeovers. Founder CEOs with their higher ownership stakes are more likely to be concerned about ownership dilution and control issues compared to non-founder CEOs and therefore more reluctant to seek equity financing. Consistent with this view, Berger et al. (1997) find that leverage is positively related to CEO ownership suggesting that managers turn to debt to consolidate their voting power and reduce the probability of takeovers. The choice of founder CEO at IPO may therefore be interpreted as a signal of a more conservative approach to seeking equity financing post-IPO, and hence lower potential for growth. Consequently, growth oriented IPO firms with a strong demand for equity capital are more likely to go public with non-founder CEOs.

Hypothesis 7. The probability of founder CEO at IPO is negatively related to the demand for equity capital.

3.8. Outside blockholder ownership

Extant research on CEO replacement has indicated that higher concentrated outside ownership influences top management appointment decisions and CEO turnovers by vesting greater decision-making authority in the hands of outside blockholders (Denis et al., 1997; Wasserman, 2003). Further, when outside ownership is concentrated within powerful groups, blockholders provide a credible check on the power and influence of top managers (Boeker, 1992). In the context of the IPO market, outside blockholders acting in concert due to their common interests, can become a potent force in actively monitoring the company and participating in important strategic, operational, and personnel decisions related to the going public process including the choice of CEO. Higher blockholder ownership therefore makes it more likely that founder CEOs are persuaded to step down in favor of qualified outsiders better suited to lead the company at IPO. Therefore, we predict a negative relationship between outside blockholder ownership and the probability of founder CEO at IPO.

Hypothesis 8. The probability of founder CEO at IPO is negatively related to extent of outside blockholder ownership.

4. Methods

Our initial sample consisted of 630 firms that issued initial public offerings in 1997 identified from the Securities Data Corporation (SDC) New Issues Database. Consistent with the vast majority of IPO studies, we exclude financial companies, real estate investment trusts, reverse LBOs, equity carve-outs, foreign issuers, and unit offerings as their institutional characteristics are fundamentally different from that of a typical IPO firm. Further, we require that IPO prospectuses are available for each firm and that financial data is available from the Center for Research on Security Prices (CRSP) and COMPUSTAT tapes. All the above restrictions result in a final sample of 231 IPO firms.
The IPO firms in our sample, on average, raised $45 million at the IPO and experienced average first day initial returns of 17.22%. The average number of employees in sample firms was 905. Thirty six percent of sample firms went public prior to attaining profitability. Thirty eight percent of sample firms went public with venture capital backing. The mean (median) number of VC directors on the board was 0.74 (0.00). The mean (median) percentage of VC representation on the board was 12.20% (0.00%). The average age of the firm defined as the time period from incorporation to the IPO event was 11.81 years. Thirty eight percent of sample firms issued additional equity after the IPO. Fifty eight percent of IPO firms in our sample went public with the founder CEO at the helm. Approximately, one in four IPO firms had multiple founders. The mean age of founders in the sample was 49.01 years. Further, CEO duality (CEO and chairman position occupied by the same individual) was present in slightly over half the sample firms.

The mean (median) CEO ownership in the firm was 19.13% (10.10%). The mean (median) top management team ownership (excluding CEOs) was 29.08% (27.75%). The mean (median) venture capital ownership was 10.43% (0.00%) while the mean (median) total outside blockholder ownership including VCs was 23.76% (16.25%). The mean (median) tenure of founder CEOs was 9.69 (7.50) years while the mean (median) tenure of non-founder CEOs was 3.12 (2.00) years. Further, approximately one in two non-founder CEOs were hired at least two years prior to the IPO. As such, a significant proportion of non-founder CEOs are hired to lead the company not just for the IPO and as a public corporation but also through its various phases of growth and development as a private company.

Segmenting the sample on the basis of VC backed versus non-VC backed IPO firms also reveals several significant differences between the two groups. The results indicate that VC backed IPO firms are younger, smaller, riskier, less profitable at IPO, and less likely to retain founder CEOs at IPO compared to non-VC backed firms. These results are consistent with the extant literature, which has suggested that VCs tend to focus on young, risky, high growth companies, and are able to take them public earlier than non-VC backed firms. Further, VC backed IPO firms are characterized by significantly lower proportion of insiders on the board, lower CEO ownership stakes, higher top management team ownership, and higher blockholder ownership compared to non-VC backed firms. For instance, the mean (median) CEO ownership is 11.58% (6.00%) for VC backed firms compared to 23.90% (15.45%) for non-VC backed firms and this difference is significant at the one percent level. In addition, the mean (median) top management team ownership is 32.83% (33.20%) for VC backed firms compared to 26.90% (23.50%) for non-VC backed firms and this difference is statistically significant.

4.1. Variable measurement

4.1.1. CEO founder status
The CEO founder status is a dichotomous variable that takes on the value of 1 if the CEO of the issuing firm at the time of the IPO is also the founder and zero otherwise.

4.1.2. Founder functional background
The career experiences of founders were assessed from the description provided in the IPO prospectuses. Initially, the career experiences of the founder(s) of sample firms was
coded on the basis of the following categories: (1) product R&D, (2) finance/accounting, (3) production/operations (including process engineering and process R&D), (4) marketing/sales, (5) general management (including administration and human resources), and (6) legal. Next, a dichotomous variable was constructed depending on whether the founder’s career experiences were predominantly in output-based functions or throughput-based functions. Hambrick and Mason (1984) suggested that marketing/sales and product R&D can be considered output functions while production, process engineering, and accounting can be considered throughput. Subsequently, several empirical studies have broadly adopted the Hambrick and Mason (1984) approach of classifying functional tracks into either the throughput or output functional categories (Barker and Mueller, 2002; Datta and Rajagopalan, 1998; Waller et al., 1995). Consistent with the approach in the above-described studies, we assign founders with career experiences in product R&D and marketing/sales in the output functional category while those with experience in production and operations, accounting/finance, legal, and general management (administration) in the throughput category. Therefore, the variable founder functional background takes on the value 1 if the founder’s career experiences are in output functions and zero if in throughput functions.

In addition, we also evaluated the impact of founder experience in specific functional areas on the probability of founder CEO at IPO. Since the career experience categories are not mutually exclusive, we adopted the approach outlined in Barker and Mueller (2002) and created a dummy variable for each functional track. This resulted in five dummy variables (product R&D, production/operations, general management (administration), marketing/sales, and finance/accounting) each coded as 1 if the founder had career experience in a specific area and zero otherwise. Therefore, a positive and significant coefficient for the dummy variable product R&D indicates that the probability of founder CEO at IPO is higher for firms whose founders have product R&D experience versus firms whose founders have experience in areas other than product R&D.

4.1.3. Founder age

Founder age is measured as the age of the founder at the time of the IPO in years. In instances where multiple founders were involved, the average age of the founders is used as a measure of founder age.

4.1.4. Size of founding team

The size of the founding team is measured by the number of founders for each IPO firm.

4.1.5. Venture capital involvement

Venture capital involvement is measured by a dummy variable that takes on the value of 1 if the IPO issuing firm received venture capital backing and zero otherwise.

4.1.6. Venture capital influence on the board

The variable VC influence on the board is measured by the number of venture capitalists serving on the board of the IPO firm. We repeat our analysis using the percentage of venture capitalists on the board with qualitatively similar results.
4.1.7. Demand for equity financing

A dummy variable is constructed that takes on the value 1 if the firm issued equity during the three-year post-IPO period and 0 otherwise. We also re-estimate our results using the number of uses for the IPO proceeds listed in the IPO prospectus as an alternative measure for the demand for equity financing. The number of uses for the IPO proceeds is assumed to proxy for the extent of demand for external funds with a higher number of uses indicating stronger demand. The results of the analysis with this alternative proxy for demand for equity capital is qualitatively similar to those reported in the paper.\(^3\)

4.1.8. Board composition

Consistent with the extensive corporate governance literature, we measure the proportion of insiders on the board of directors as the ratio of firm officers on the board of directors to the total number of board members (Certo et al., 2001; Johnson et al., 1993; Seward and Walsh, 1996).

4.1.9. Outside blockholder ownership

Outside blockholder ownership is measured by the extent of total institutional ownership including venture capital ownership at the time of the IPO.

4.1.10. TMT independence

Top management team independence is measured by the extent of officer and director ownership (excluding the CEO) prior to the IPO.

4.1.11. Industry effects

We control for industry effects by including a dummy variable for each of the five major industry groups in our sample. We also evaluate the impact of the interaction of founder functional background and industry on the probability of founder CEO at IPO. Similarly, since the demand for external equity financing by IPO firms is likely to be driven by industry conditions, we also include an interaction term that captures the fit between industry environment and demand for equity financing and evaluate its impact on the probability of founder CEO at IPO.

4.1.12. Firm size

We control for differences in the size of IPO issuing firms. Larger firms are presumed to be more mature, better known, and with more employees compared to smaller firms thereby requiring different skills sets from CEO candidates which in turn is likely to influence the founder CEO succession decision (Wasserman, 2003). Consistent with the IPO literature, we measure firm size as the log of the IPO proceeds. We repeat our analysis with alternative specifications such as log number of employees, and log of sales with qualitatively similar results.

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\(^3\) Since data on pre-IPO fund raising for private companies is generally unavailable, we estimate the demand for post-IPO capital using both a pre-IPO proxy such as the number of uses for the IPO proceeds indicated in the offering prospectus as well as a post-IPO measure such as whether the firm issued additional equity after the IPO.
4.1.13. Risk
Consistent with several other studies involving IPO firms, we control for the risk of the firm using the number of risk factors reported in the prospectus as a measure of risk (Beatty and Zajac, 1994; Certo et al., 2001). Since the standard deviation of aftermarket returns has been widely used in the finance literature as a proxy for risk, we repeat the analysis with this alternative measure. The two proxies for risk are significantly correlated with a correlation coefficient of 0.2634 (p-value=0.0001) and the results are qualitatively similar with both measures.

4.1.14. Net earnings per share
We control for differences in net earnings per share at the time of going public.

4.1.15. Firm age
Consistent with prior studies, we control for the age of the firm, which is measured as the number of years from the date of incorporation to the IPO (Davilla et al., 2003).

5. Results
In Table 1, the percentage of founder CEOs and percentage of founders with output versus throughput functional background, segmented by industry, are reported. The results indicate that 135 firms representing 58.44% of the sample went public with founder CEOs. The proportion of firms with founder CEOs at IPO, however, vary by industry. The three industries with the largest proportion of founder CEOs at IPO were Miscellaneous Retail Services (72.72%), Oil and Gas Extraction (71.42%), and Analyzers and Control Equipment (68.42%). The three industries with the lowest proportion of founder CEOs at IPO were Health Services (40%), Chemical and Allied Products (42.85%) and Industrial Table 1

<table>
<thead>
<tr>
<th>Industry</th>
<th># (%) founder CEOs</th>
<th># (%) non-founder CEOs</th>
<th># (%) founders with output functional background</th>
<th># (%) founders with throughput functional background</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business services</td>
<td>36 (61.01)</td>
<td>23 (38.98)</td>
<td>32 (54.23)</td>
<td>27 (45.76)</td>
</tr>
<tr>
<td>Electronic and electrical equipment and components except computer equipment</td>
<td>11 (55.00)</td>
<td>9 (45.00)</td>
<td>14 (70.00)</td>
<td>6 (30.00)</td>
</tr>
<tr>
<td>Analyzers and control instruments</td>
<td>13 (68.42)</td>
<td>6 (31.57)</td>
<td>12 (63.15)</td>
<td>7 (36.84)</td>
</tr>
<tr>
<td>Chemical and allied products</td>
<td>6 (42.85)</td>
<td>8 (57.15)</td>
<td>13 (92.85)</td>
<td>1 (7.15)</td>
</tr>
<tr>
<td>Industrial and commercial machinery and computer equipment</td>
<td>7 (53.84)</td>
<td>6 (46.15)</td>
<td>9 (69.23)</td>
<td>4 (30.76)</td>
</tr>
<tr>
<td>Research and management services</td>
<td>8 (66.66)</td>
<td>4 (33.33)</td>
<td>8 (66.66)</td>
<td>4 (33.33)</td>
</tr>
<tr>
<td>Miscellaneous retail services</td>
<td>8 (72.72)</td>
<td>3 (27.27)</td>
<td>5 (45.45)</td>
<td>6 (54.54)</td>
</tr>
<tr>
<td>Oil and gas extraction</td>
<td>5 (71.42)</td>
<td>2 (28.57)</td>
<td>3 (42.85)</td>
<td>4 (57.14)</td>
</tr>
<tr>
<td>Miscellaneous manufacturing</td>
<td>3 (60.00)</td>
<td>2 (40.00)</td>
<td>2 (40.00)</td>
<td>3 (60.00)</td>
</tr>
<tr>
<td>Health services</td>
<td>2 (40.00)</td>
<td>3 (60.00)</td>
<td>2 (40.00)</td>
<td>3 (60.00)</td>
</tr>
<tr>
<td>Others</td>
<td>36 (54.54)</td>
<td>30 (45.45)</td>
<td>27 (40.90)</td>
<td>39 (59.09)</td>
</tr>
<tr>
<td>Total</td>
<td>135 (58.44)</td>
<td>96 (41.56)</td>
<td>127 (54.98)</td>
<td>104 (45.02)</td>
</tr>
</tbody>
</table>
and Commercial Machinery and Computer Equipment (53.84%). The results in Table 1 also indicate that the proportion of founders with output functional background varies by industry. The three industries with the highest proportion of founders with output functional backgrounds were Chemical and Allied Products (92.85%), Electronic and Electrical Equipment and Components except computer equipment (70%), and Industrial and Commercial Machinery and Computer Equipment (69.23%). The three industries with the lowest percentage of founders with output functional backgrounds include Health Services (40%), Miscellaneous Manufacturing (40%), and Oil and Gas Extraction (42.85%).

Table 2 provides a comparison of founder led IPO firms versus non-founder led IPO firms. The results in Table 2 indicate several significant differences between these two groups of IPO firms. For instance, for founder CEO firms, 62% of founders have career experiences in output-based functions compared to 45% of founders for non-founder CEO IPO firms and the difference is statistically significant. The results also indicate that the mean age of the founder at IPO is 52.15 years for non-founder CEO firms compared to 47.23 years for founder CEO IPO firms and the difference is statistically significant. In addition, the mean size of the founding team for founder CEO firms is 1.61 compared to 1.08 for non-founder CEO firms and the difference is statistically significant.

<table>
<thead>
<tr>
<th>Variable description</th>
<th>Founder CEO IPO firms</th>
<th>Non-founder CEO IPO firms</th>
<th>Test of difference t(Z) statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (median)</td>
<td>0.62 (1.00)</td>
<td>0.45 (0.00)</td>
<td>(2.65)* (2.61)*</td>
</tr>
<tr>
<td>Founder functional background</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founder age (years)</td>
<td>47.23 (48.00)</td>
<td>52.15 (52.00)</td>
<td>−3.63* (−1.62)</td>
</tr>
<tr>
<td>Size of founding team</td>
<td>1.61 (1.00)</td>
<td>1.08 (1.00)</td>
<td>5.75* (5.35)*</td>
</tr>
<tr>
<td>CEO duality</td>
<td>0.72 (1.00)</td>
<td>0.25 (0.00)</td>
<td>7.40* (6.57)*</td>
</tr>
<tr>
<td>Percentage of insiders on the board</td>
<td>0.43 (0.40)</td>
<td>0.35 (0.33)</td>
<td>2.96* (2.66)*</td>
</tr>
<tr>
<td>Board size</td>
<td>5.96 (6.00)</td>
<td>6.63 (6.00)</td>
<td>−4.19* (−3.02)*</td>
</tr>
<tr>
<td>Venture capital involvement</td>
<td>0.35 (0.00)</td>
<td>0.41 (0.00)</td>
<td>−0.83 (0.84)</td>
</tr>
<tr>
<td>Number of venture capitalists on the board</td>
<td>0.6 (0.00)</td>
<td>0.98 (0.00)</td>
<td>−2.36* (−1.47)</td>
</tr>
<tr>
<td>Percentage of board seats occupied by</td>
<td>10.01 (0.00)</td>
<td>15.68 (0.00)</td>
<td>−2.19** (−1.48)</td>
</tr>
<tr>
<td>venture capitalists</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand for equity financing</td>
<td>0.34 (0.00)</td>
<td>0.45 (0.00)</td>
<td>−1.65*** (−1.64)**</td>
</tr>
<tr>
<td>Offer size (Sm)</td>
<td>44.68 (30.00)</td>
<td>45.35 (35.00)</td>
<td>−0.09 (−1.38)</td>
</tr>
<tr>
<td>Number of risk factors</td>
<td>20.14 (19.00)</td>
<td>20.26 (20.00)</td>
<td>−0.20 (−1.76)**</td>
</tr>
<tr>
<td>CEO ownership (%)</td>
<td>26.30 (18.96)</td>
<td>6.95 (3.60)</td>
<td>8.58* (6.29)*</td>
</tr>
<tr>
<td>Top management team ownership</td>
<td>25.94 (22.10)</td>
<td>34.38 (35.20)</td>
<td>−2.92* (−3.17)*</td>
</tr>
<tr>
<td>Venture capital ownership</td>
<td>9.40 (0.00)</td>
<td>12.06 (0.00)</td>
<td>−1.13 (−0.94)</td>
</tr>
<tr>
<td>Non-VC outside blockholder ownership</td>
<td>10.62 (0.00)</td>
<td>17.62 (9.75)</td>
<td>−2.36** (−1.96)**</td>
</tr>
<tr>
<td>Total outside blockholder ownership</td>
<td>20.02 (11.75)</td>
<td>29.68 (27.90)</td>
<td>−2.69* (−2.25)**</td>
</tr>
<tr>
<td>Net earnings per share ($)</td>
<td>−0.06 (0.30)</td>
<td>−0.14 (0.130)</td>
<td>0.37 (1.08)</td>
</tr>
<tr>
<td>Initial returns (%)</td>
<td>18.09 (7.69)</td>
<td>15.97 (11.57)</td>
<td>0.43 (−0.61)</td>
</tr>
<tr>
<td>Firm age (years)</td>
<td>10.26 (8.00)</td>
<td>13.98 (6.75)</td>
<td>−1.86*** (0.85)</td>
</tr>
</tbody>
</table>

* Significant at the 0.01 level.
** Significant at the 0.05 level.
*** Significant at the 0.10 level.
The results in Table 2 also indicate significant differences in the governance structure of founder led versus non-founder led IPO firms. For instance, CEO duality is present in 72% of founder CEO firms compared with 25% for non-founder CEO firms and the difference is statistically significant. In addition, the percentage of insiders on the board is significantly higher for founder CEO firms compared to non-founder CEO IPO firms. The board size however, is significantly smaller for founder CEO IPO firms with mean (median) number of directors being 5.97 (6.00) compared to mean (median) number of directors being 6.63 (6.00) for non-founder CEO firms. Further, while 35% of founder CEO firms attract venture capital participation compared to 41% for non-founder CEO firms, this difference is not statistically significant. However, both the mean number and percentage of board seats occupied by VCs is significantly higher for non-founder CEO firms.

The demand for equity financing is significantly lower for founder CEO firms. Thirty four percent of founder CEO IPO firms issued additional equity within three years of the IPO compared to 45% of non-founder CEO IPO firms and the difference is statistically significant. The results in Table 2 also indicate significant differences in the ownership structure of founder led and non-founder led IPO firms. Not surprisingly, the mean (median) percentage CEO ownership in founder led firms is 26.30% (18.96%) compared to 6.95% (3.60%) for non-founder led firms and the difference is statistically significant. The top officer/director ownership is also significantly lower for founder led firms with a mean (median) value of 25.94% (22.10%) compared to 34.38% (35.20%) for non-founder led firms and this difference is statistically significant. Further, while venture capital ownership of founder led firms is lower than that of non-founder led firms, the difference is not statistically significant. The total outside blockholder ownership is significantly lower for founder led firms with a mean (median) of 20.02% (11.75%) compared to a mean (median) of 29.68% (27.90%) for non-founder led firms and this difference is statistically significant. Finally, there are few consistently significant differences in firm characteristics such as age of firm, risk, size, and net earnings per share between founder and non-founder led firms.

Table 3 provides the results of logistic regression analysis aimed at identifying factors that influence the probability of founder CEOs at IPO. In model 1, founder functional background is included as an independent variable and is modeled on the basis of the dichotomous output versus throughput classification. In addition, the other independent variables include founder age, size of founding team, board composition, extent of demand for equity financing, VC involvement, interaction of founder functional background and VC involvement, four control variables (firm size, firm age, net earnings per share, and risk factors), and five industry effect dummy variables that capture the major industry groups in the sample. The results in model 1 of Table 3 indicate that the coefficient of founder functional background is positive and significant indicating that the probability of founder CEO at IPO is higher when their career experiences are in output-based functions as predicted by Hypothesis 1. The coefficient of founder age is negative and significant indicating that the probability of founder CEO at IPO is negatively related to the age of the founder as predicted by Hypothesis 2. The coefficient of size of founding team is positive and significant indicating that the probability of founder CEO at IPO is positively related to the size of the founding team as predicted by Hypothesis 3. The coefficient of board composition is positive and significant indicating that the probability of founder CEOs at IPO increases with the increase in the proportion of insiders on the board as predicted by Hypothesis 5. The
## Table 3

Logit analysis determinants of probability of founder CEO at IPO

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Model 1 Coefficient (p-value)</th>
<th>Model 2 Coefficient (p-value)</th>
<th>Model 3 Coefficient (p-value)</th>
<th>Model 4 Coefficient (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>5.7101 (0.0046)***</td>
<td>6.5050 (0.0082)***</td>
<td>7.1017 (0.0164)**</td>
<td>7.1090 (0.0188)**</td>
</tr>
<tr>
<td>Founder functional background</td>
<td>1.0131 (0.0357)**</td>
<td>2.2228 (0.0619)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product R&amp;D experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marketing/sales career experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production/operations career experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General management (administration) career experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Finance/accounting career experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Functional diversity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founder age</td>
<td>-0.0814 (0.0002)***</td>
<td>-0.0854 (0.0010)***</td>
<td>-0.0933 (0.0016)***</td>
<td>-0.1004 (0.0015)***</td>
</tr>
<tr>
<td>Size of founding team</td>
<td>1.3186 (0.0009)***</td>
<td>1.5030 (0.0008)***</td>
<td>2.8920 (0.0002)**</td>
<td>2.9770 (0.0002)***</td>
</tr>
<tr>
<td>Board composition</td>
<td>2.5000 (0.0222)**</td>
<td>2.3715 (0.0725)*</td>
<td>2.9072 (0.0820)*</td>
<td>3.7475 (0.0015)**</td>
</tr>
<tr>
<td>TMT independence</td>
<td></td>
<td>-0.0209 (0.0563)</td>
<td>-0.0170 (0.0902)</td>
<td>-0.0173 (0.0951)*</td>
</tr>
<tr>
<td>Total outside blockholder ownership</td>
<td></td>
<td>-0.0113 (0.0960)*</td>
<td>-0.0363 (0.0936)</td>
<td>-0.0393 (0.0077)**</td>
</tr>
<tr>
<td>VC involvement</td>
<td>0.5849 (0.3291)</td>
<td>1.6079 (0.0373)**</td>
<td>0.6868 (0.3168)</td>
<td>0.7407 (0.2914)</td>
</tr>
<tr>
<td>VC influence on board</td>
<td></td>
<td>-0.6821 (0.0376)**</td>
<td>-0.9338 (0.0099)**</td>
<td>-0.9728 (0.0101)**</td>
</tr>
<tr>
<td>Demand for equity financing</td>
<td>-0.5662 (0.1442)</td>
<td>-3.3683 (0.0093)**</td>
<td>0.1846 (0.7354)</td>
<td>-1.1884 (0.1776)</td>
</tr>
<tr>
<td>Firm size (logged)</td>
<td>-0.5975 (0.0207)**</td>
<td>-0.5904 (0.0575)*</td>
<td>-0.6320 (0.0950)</td>
<td>-0.6461 (0.1000)*</td>
</tr>
<tr>
<td>Firm age (logged firm age)</td>
<td>0.1314 (0.5289)</td>
<td>0.2426 (0.3221)</td>
<td>-0.1141 (0.7090)</td>
<td>-0.1607 (0.6024)</td>
</tr>
<tr>
<td>Net earnings per share</td>
<td>0.0005 (0.9969)</td>
<td>-0.0179 (0.9172)</td>
<td>0.1783 (0.4439)</td>
<td>0.1637 (0.4931)</td>
</tr>
<tr>
<td>Risk factors</td>
<td>-0.0892 (0.0623)*</td>
<td>-0.1195 (0.0406)**</td>
<td>-0.1147 (0.0903)*</td>
<td>-0.1179 (0.0859)*</td>
</tr>
<tr>
<td>Founder functional background * VC</td>
<td>-1.2471 (0.0995)*</td>
<td>-1.4840 (0.0920)*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Founder functional background * industry</td>
<td>-0.0153 (0.4341)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand for equity financing * industry</td>
<td>0.0519 (0.0185)**</td>
<td></td>
<td></td>
<td>0.0421 (0.0985)*</td>
</tr>
<tr>
<td>Business services industry</td>
<td>0.9010 (0.0544)*</td>
<td>0.9202 (0.0928)*</td>
<td>2.1120 (0.0034)**</td>
<td>2.4745 (0.0015)**</td>
</tr>
<tr>
<td>Electronic and electric equipment industry</td>
<td>-0.1247 (0.8580)</td>
<td>0.7800 (0.4443)</td>
<td>0.2313 (0.8108)</td>
<td>0.6713 (0.5143)</td>
</tr>
<tr>
<td>Analyzers and control equipment</td>
<td>0.0567 (0.9336)</td>
<td>0.4914 (0.6110)</td>
<td>-0.8871 (0.3917)</td>
<td>-0.6869 (0.5248)</td>
</tr>
<tr>
<td>Chemical and allied products industry</td>
<td>-0.9468 (0.2862)</td>
<td>-0.2342 (0.8325)</td>
<td>-3.2618 (0.0075)**</td>
<td>-2.3878 (0.0720)**</td>
</tr>
<tr>
<td>Machinery and computer equipment industry</td>
<td>-0.7345 (0.2946)</td>
<td>-0.7394 (0.3700)</td>
<td>-1.7766 (0.0511)*</td>
<td>-1.3693 (0.1445)</td>
</tr>
<tr>
<td>Log likelihood ratio</td>
<td>59.34 (0.0001)**</td>
<td>70.42 (0.0001)**</td>
<td>71.92 (0.0001)**</td>
<td>74.63 (0.0001)**</td>
</tr>
</tbody>
</table>

***Significant at the 0.01 level; **significant at the 0.05 level; *significant at the 0.10 level.
coefficient of venture capital involvement however, is not significant indicating that the presence or absence of venture capital participation is not related to founder CEO succession thereby not providing support to Hypothesis 4. Later in this section, the impact of the extent of venture capital influence on probability of founder CEO succession is analyzed.

The results in model 1 of Table 3 also indicate that the coefficient of the interaction of founder functional background and VC participation is negative and significant as predicted by Hypothesis 4A. The coefficient of demand for equity financing is negative but not significant. In addition, the results in model 1 indicate that the probability of founder CEO at IPO declines with the size of the firm and the number of risk factors. Further, the coefficient of Business Services industry is positive and significant indicating higher probability of founder CEO at IPO for firms in this industry. None of the other industry coefficients are significant.

In model 2, in addition to the independent variables included in model 1, several additional independent variables are included such as VC influence on the board, TMT independence, Outsider blockholder ownership, interaction between founder functional background and industry, and interaction between demand for equity financing and industry. Once again, while founder functional background, size of founding team, and board composition coefficients are positive and significant, the coefficient of founder age is negative and significant. The coefficient of TMT independence is negative and significant, indicating that probability of founder CEO at IPO is higher when the TMT is less independent as predicted by Hypothesis 6. The coefficient of VC influence on board is negative and significant indicating lower probability of founder CEO at IPO when venture capitalists have a strong presence on the board as predicted by Hypothesis 4B. The coefficient of outside blockholder ownership is also negative and significant indicating lower probability of founder CEO at IPO when outside blockholder ownership is high as predicted by Hypothesis 8. Similar to model 1, the control variables firm size and risk factors are negative and significant.

The results in model 2 also indicate the existence of industry effects. Similar to model 1, the coefficient of the business service industry is positive and significant. Further, the coefficient of the interaction of demand for equity financing and industry is significant indicating that the probability of founder CEO at IPO is influenced by the fit between industry conditions and the demand for external equity financing. In industries where the path to profitability is quicker, the demand for external equity financing by IPO firms is likely to be lower which in turn enhances control by founders as a result of lower ownership dilution. The coefficient of the interaction between founder functional background and industry however, is not significant.

In model 3, instead of analyzing the impact of founder functional background using the output versus throughput classification, we evaluate the impact of each functional track separately on the probability of founder CEO at IPO. Therefore, five dummy variables each representing a specific functional track are included as independent variables. In addition, we include functional diversity measured by the number of functional areas where the founder had gained prior experience to capture the breadth of founder experience. The remaining independent variables in model 3 include founder age, size of founding team,
board composition, VC involvement, VC influence on board, TMT independence, outside blockholder ownership, demand for equity financing, industry effect variables, and the four control variables. The results in model 3 indicate that the coefficient of product R&D experience is positive and significant which suggests that the probability of founder CEO at IPO is higher when the founder’s career experience is in product R&D. The coefficient of the variable marketing/sales experience however, is negative and insignificant thereby suggesting that not all output-based functions improve the odds of founder CEO at IPO. The coefficient of each of the throughput-based functions such as production/operations, finance/accounting, and general management (administration), are not significantly related to the probability of founder CEO at IPO. In addition, the results suggest that the probability of founder CEO at IPO increases with the functional diversity of the founders. Consistent with the previous two models in Table 3, the coefficients of founder age, TMT independence, VC influence on board, and outside blockholder ownership are negative and significant while the coefficients of size of founding team, and board composition are positive and significant. In addition, similar to the previous models, the coefficients of control variables firm size and risk factors are negative and significant.

The results related to industry effects, however, are stronger in model 3. The coefficients of three of the five industry variables are significant. While the coefficient of Business Service industry is positive and significant, the coefficients of Chemical and Allied products industry and Machinery and Computer Equipment industry are negative and significant. Therefore, our results point to industry conditions as a factor influencing the probability of founder CEO at IPO. To further analyze the industry effects, in model 4 we include all the independent variables employed in model 3 along with an additional variable to capture the fit between industry conditions and demand for equity financing. Consistent with the results in model 2, the coefficient of the interaction between industry and external financing needs in model 4 is positive and significantly related to probability of founder CEO at IPO.

In results not reported in the paper, we conducted additional robustness tests on the choice of measures of founder functional background and industry conditions. For instance, we repeated our analyses using alternative empirical definitions of output versus throughput functional categories as described in Datta and Rajagopalan (1988), Hambrick and Mason (1984), and Waller et al. (1995) with qualitatively similar results. In addition, we also evaluated whether prior founder experience in downstream versus upstream organizations influenced the probability of founder CEO at IPO. Our results indicate that the probability of founder CEO at IPO is higher when founders’ prior experience is in downstream organizations. Overall, our results support the argument that founder experience in output-based functional tracks or downstream organizations where the focus of attention is on innovation and product development increases the probability of founder CEO at IPO. Finally, we additionally evaluated industry effects by constructing a dichotomous variable that captured whether the IPO firm belonged to a high technology versus low technology industry using the industry technological status definition adopted by Certo et al. (2001). The coefficient of the technology variable was positive and significant indicating that the probability of founder CEO at IPO is higher in high technology industries. Further, we found that the interaction of industry technological status and demand for equity financing was significant further supporting the conjecture that the fit between industry conditions and demand for equity financing influences probability of founder CEO at IPO.
In summary, the results of our analysis indicate that output-based founder functional background, size of founding team, and insider presence on the board raise the probability of founder CEO at IPO while founder age, VC influence on board, TMT independence, and outside blockholder ownership lower the probability of founder CEO at IPO. The coefficients of VC involvement, and demand for equity financing however, are not consistently significant. Finally, we find evidence to suggest that the industry environment and the fit between industry conditions and the demand for equity financing affect the probability of founder CEO at IPO. Overall, the results of our analysis in Table 3 provide support for Hypotheses 1, 2, 3, 4A, 4B, 5, 6, and 8 while Hypotheses 4 and 7 are not supported.

6. Discussion

This study attempts to identify factors that influence the choice between founder versus non-founder CEOs for firms issuing IPOs. Specifically, the focus of this research is to explore the extent founder characteristics such as functional background, age, and size of founding team as well as variables related to governance structure, ownership structure, VC involvement, and demand for equity financing influence the choice of founder versus non-founder CEO for IPO firms.

The results of this study indicate that founder characteristics, governance structure, ownership structure, and extent of VC influence are all influential in determining the likelihood of founder CEO at IPO. For instance, we find that founders with output-based career experiences are more likely to retain the CEO position at IPO compared to founders with throughput-based career experiences. Further, drilling down to individual functional tracks, our results indicate that founders with career experiences in product R&D are more likely to retain the CEO position at IPO compared to founders with career experiences in other functional tracks. In combination, our results with founder functional background indicate that not all output-based functions significantly influence the likelihood of founder CEOs at IPO. Our results suggesting that among output-based functions only product R&D significantly influences the probability of founder CEO at IPO are consistent with the extant literature that has alluded to the value and potential benefits of R&D backgrounds for top managers particularly in high technology businesses. For instance, researchers have argued that executives with R&D backgrounds are perceived to represent progress, invention, and improvement, better able to react to changes in product design and technologies, and more likely to invest in R&D (Barker and Mueller, 2002; Waller et al., 1995). In addition, researchers have suggested that top managers with R&D experience are critical in technologically intensive industries where technical expertise and development of innovative products is vital to achieving a sustainable competitive advantage (Hambrick, 1981; Hambrick et al., 1992). Further, extant evidence indicates that founders with career experience in R&D are less likely to depart further underscoring the importance of R&D to the future success of new ventures (Boeker and Karichalil, 2002). Overall, our results are consistent with the notion that growth oriented IPO investors are more favorably inclined towards founder CEOs whose career experiences have adequately prepared them to envision and pursue innovation and growth strategies.

We also examine whether prior experience in downstream versus upstream businesses influence the likelihood of founders retaining the CEO position as the firm transitions to a
public corporation. We find that prior experience in downstream businesses increases the likelihood of founder CEOs for IPO firms. Since firms tend to go public in industry clusters, the proportion of downstream versus upstream businesses going public in any year is likely to vary over time. For instance, in our sample year, 60% of IPOs firms were in downstream businesses. Examining more recent years that were not in our sample period, we find evidence of a change in the proportion of upstream versus downstream businesses among IPO firms over the years. The increase in the proportion of upstream businesses among IPO firms in more recent years can be partly attributed to the recent increase in demand for commodities, energy, and outsourcing services that have led to higher number of IPOs from these sectors. As such, our findings are suggestive of the fact that higher incidence of founder CEOs should be observed in the IPO market in periods where a greater proportion of firms going public are in downstream businesses relative to periods where IPOs from upstream businesses are more prevalent.

In addition, our results indicate a negative relationship between founder age and probability of founder CEO at IPO. Since the extant literature has argued that age proxies for traits such as risk taking behavior and effort aversion, our results suggest that IPO investors seek CEOs with low risk and effort aversion to lead the company as it transitions from private to public ownership. Our results also indicate that the presence of multiple founders increases the likelihood of founder CEO at IPO, which is consistent with the notion that larger founding teams increase the bargaining power of founder CEOs.

We find that both the governance structure and ownership structure of firms going public influence the choice of founder versus non-founder CEO at IPO. We find that the probability of founder CEO at IPO is higher when boards are structured to be less independent as is the case with insider dominated boards. One way to alleviate concerns regarding board independence of insider-dominated boards is through significant ownership stakes in the IPO firm by TMT members. Higher ownership by TMT members increases their independence from the CEO and makes it more likely that the board would support an outsider CEO if it helped improve valuations at the IPO. Consistent with this notion, our study provides evidence to indicate that higher TMT ownership results in lower likelihood of founder CEOs leading the firm as it transitions from a private to public entity. Overall, our results suggest that the probability of founder CEO succession prior to the IPO is higher for independent boards whether independence arises as a result of larger number of outside directors or higher top management team ownership, or a combination of the two.

The extant literature has argued that venture capitalists are generally quicker as well as more likely to replace founder CEOs. Our results suggest that the mere presence or absence of venture capital by itself does not influence the founder CEO succession decision. Rather, our results reveal that it is the extent of influence exerted by VCs on the board that is related to the probability of founder CEO at IPO. We find that the greater the number of board seats occupied by VCs, the lower the probability of founder CEO at IPO. Further, we find evidence to indicate a significant negative relationship between outside blockholder ownership and the probability of founder CEO at IPO. Our results therefore, indicate that factors that increase the ability of VCs to influence the strategic direction and decision-making processes of the IPO firm such as a stronger presence on the board of directors and/or higher outside institutional ownership tend to lower the probability of founder CEO at IPO.
Overall, our results add to our understanding of factors that influence whether founder CEO succession is triggered prior to the IPO. An interesting area of future research is to study the extent and causes of CEO turnover after the IPO. In addition, assessing whether non-founder CEOs are short term specialists whose main role is to execute a successful IPO or whether they have longer tenures with the ability to shape the long term strategic direction of the firm as a public company is likely to be another interesting avenue of research. Studying the circumstances, timing, and consequences of CEO exit after the IPO can provide some additional insights into the role of both founder and non-founder CEOs in the IPO market.

References


