

RELAYS AND MARATHONS: THE EFFECTS OF SUCCESSION CHOICE
SURROUNDING CEO TURNOVER ANNOUNCEMENTS

by

Vincent Intintoli

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As members of the Dissertation Committee, we certify that we have read the dissertation prepared by Vincent Intintoli

entitled Relays and Marathons: The Effects of Succession Choice Surrounding CEO Turnover Announcements

and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy

_____ Date: June 18, 2007
Kathleen Kahle

_____ Date: June 18, 2007
Edward A. Dyl

_____ Date: June 18, 2007
Sandy Klasa

_____ Date: June 18, 2007
Thomas W. Bates

_____ Date: June 18, 2007
Ronald L. Oaxaca

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copies of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

_____ Date: June 18, 2007
Dissertation Director: Kathleen Kahle

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SIGNED: Vincent Intintoli

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ABSTRACT

This study examines marathon successions, which I define as instances where a permanent successor is not chosen at the time of a CEO departure. Marathons have become increasingly prevalent over the last ten years and represent the majority of succession decisions surrounding forced turnovers from 1995-2005. Firms implementing marathon successions around forced turnovers have strong internal governance structures, as measured by board size, director ownership, percentage of outside directors, and dual Chairman/CEO appointments. In addition, I find little evidence supporting the argument that extending the succession process through the use of a marathon leads to increases in uncertainty and/or agency costs in the form of horizon problems. Lastly, I find positive and significant announcement returns for forced marathon successions. These results provide insight into the succession process and the role of strong internal corporate governance in evaluating and implementing succession decisions.

1. INTRODUCTION

Chief executive officer (CEO) turnover decisions lead to important changes in firm structure and provide insight into the effectiveness of internal corporate governance. Empirical evidence shows that stock returns, accounting-based performance, and stock return volatility levels are all affected by both turnover (e.g., forced versus friendly) and succession (e.g., external versus internal) decisions.¹ Recent CEO succession decisions of large, influential firms such as Coca-Cola and McDonald's highlight the importance of succession planning, which assists in the effectiveness of leadership changes. Both analysts and the media praised the swift and effective succession decisions of McDonald's following the untimely death of their CEO, Jim Cantalupo, and expressed concern over the "ad hoc" succession planning by Coca-Cola surrounding the retirement of CEO Douglas Daft.² These reactions emphasize general market sentiment: proper succession planning alleviates uncertainties and has the potential to increase firm value.

Relays, which are instances in which an internal executive is groomed to become the next chief executive, and outside successions are often thought of as being the two most common forms of succession (Vancil 1987, Naveen 2006). In these cases, both the CEO turnover and succession decisions are characterized as being determined in a joint framework. However, I document an additional succession decision that has become increasingly prevalent over the last ten years. I call these decisions marathon

¹ For example, see Borokhovich et al. (1996), Denis and Denis (1995), Huson et al. (2004), and Clayton et al. (2005).

² General investor reactions to these succession announcements are documented in the press by Hymowitz and Lublin (2004), Terhune (2004), and Terhune and Lublin (2004). Overall, eight Wall Street Journal articles are devoted to the Coca-Cola succession issue alone, signifying the perceived importance of firm succession planning and implementation.

successions, and define them as instances where a permanent successor is not named at the time of a CEO turnover announcement. Marathon decisions run counter to the traditional view of how a succession process should be implemented by separating the timing of both the CEO turnover and permanent succession decisions. For my sample period of 1984-2005, the average time between the turnover and formal succession announcement exceeds six months for marathons. From 1984-1994 marathons represent 12% of all successions, while from 1995-2005 they nearly double in frequency, representing over 22% of all succession decisions and over 50% of all forced turnover successions.

Marathon successions face a number of criticisms. Specifically, it is argued that separating the timing of the turnover and succession decisions can lead to decreases in productivity and missed opportunities caused by the unstable nature of the succession and the absence of a permanent leader. Analogous costs may also surface as the incumbent CEO or interim successor manages the firm throughout the marathon succession process. The short-term nature of the CEO appointment can give rise to agency costs in the form of horizon problems similar to those documented when top executives approach well-defined departures (Gibbons and Murphy 1992).

Due to the issues believed to be associated with extending the succession process, marathons are often thought of as being the result of ineffective governance on the part of the board of directors. These criticisms have been made by the financial press, business consultants, and academics; however, they have yet to be examined empirically.³ I test

³ For example, see Vancil (1987), Hymowitz and Lublin (2004), and Charan (2005).

the predictions of these arguments and propose an alternative explanation that considers (1) which firms are likely to benefit most from marathons and (2) how the potential costs of extending the succession process can be mitigated with the existence of strong internal monitoring.

Overall, evidence suggests that marathons are effective forms of succession for many firms. First, I show that marathon successions are more likely to occur in cases of forced turnover during early stages of the incumbent's appointment. Marathons represent over half (53%) of all succession decisions surrounding forced turnovers over the period 1995-2005, which is consistent with the argument that firms are likely to benefit most from extending the succession process in instances in which their ability to effectively design and implement a succession plan is at its lowest.

Second, I document that firms that implement marathon successions after forced turnovers have stronger internal governance structures, as measured by board size, director ownership, percentage of outside directors, and dual Chairman/CEO appointments. Third, I test whether horizon problems are more prevalent for marathons and whether extending the succession process results in increased market uncertainties, as measured by stock return volatility. Specifically, I find that the level of uncertainty surrounding forced turnover marathon succession announcements is no different than that of forced relay or outside decisions. Similarly, results suggest that horizon problems do not seem to be any more pronounced for firms who implement marathons. These results support the notion that a sound governance structure diminishes the expected costs associated with applying a marathon succession; the existence of effective monitors

enables the firm to efficiently continue current strategies as well as execute new policy during the transitory period between turnover and permanent succession decisions.

Lastly, market reactions to forced turnover marathons yield positive and significant abnormal returns surrounding the announcements of both the initial turnover (3.38%) and final succession (3.44%) outcomes. These abnormal returns indicate that, in the case of forced turnover, marathon successions are viewed as value increasing endeavors.

This study contributes to the literature in the following three ways. First, it is the first examination of what has become one of the most common forms of CEO succession in instances of forced turnover. Second, it broadens our understanding of turnover and succession processes by considering how the various forms of succession costs influence the likelihood of implementing a procedure that separates the CEO turnover decision from that of the succession decision. Third, it adds to the existing literature by documenting the importance of strong internal corporate governance measures in evaluating and implementing succession decisions.

The remainder of this paper is organized as follows. Section 2 outlines hypotheses and predictions while Section 3 describes the data. Section 4 provides methodological tests and empirical findings. Lastly, section 5 concludes.

2. HYPOTHESES

This section develops a number of testable hypotheses which allow for a better understanding of marathon successions. In addition, I discuss the possible implications associated with each succession choice conditional on the disposition of the turnover.

2.1 Succession planning and turnover type

(H1) Marathon successions will be more likely in cases of forced turnover during short incumbent tenures.

Active succession planning is a complex procedure that requires a solid commitment by the board of directors and chief executive to spend the necessary time and effort to both locate and prepare an appropriate successor for the transition to CEO. Vancil (1987) and Charan (2005) argue that a firm must identify and begin to prepare a successor as early as two to three years prior to the turnover announcement in order to execute an effective succession plan. In order to properly facilitate such a process, the firm must have a sufficient pool of capable and prepared internal candidates to choose from and/or have the ability to effectively monitor and evaluate potential outside candidates in a timely manner.

The succession process will be influenced by the nature of the CEO departure as well as the tenure of the incumbent. Forced turnovers will influence the ability of the board to effectively design and implement a succession plan. Early terminations can disrupt traditional succession procedures, resulting in a complete breakdown of the succession process. As Hermalin (2005) notes, such disruptions can also lead to a weak pool of available internal candidates because succession evaluation and preparation has

not yet taken place within the firm. In addition, the ability to quickly identify and employ an outside successor will depend on monitoring prior to the turnover and the labor market for external candidates. Arguably, the level of monitoring for external candidates will be lower in the earlier stages of the incumbent's tenure and hence, lower prior to forced terminations.

Firms that execute early CEO terminations may be more likely to consider separating the turnover from the succession decision, which will allow for a comprehensive examination of candidates from both within and outside the firm. A thorough examination of all available candidates is imperative in choosing an appropriate successor, who arguably will become the most influential member of the firm. For these reasons, marathons should be more likely in cases of forced turnover and/or during instances of short incumbent tenures, when the ability to effectively evaluate succession candidates is at its lowest.

2.2 Marathon successions and the costs of waiting

(H2) All else equal, costs in the form of increased uncertainty and horizon problems will be higher for marathon firms during the period between the initial turnover and final succession decision.

Costs associated with prolonging the succession process through the use of a marathon succession can also exist. These effects are the result of what can be simply called the cost of waiting. The average period between marathon turnover and succession announcements exceed six months. Critics of marathons argue that operational efficiencies and long-term strategic planning are hampered by a process that does not

allow for a more stable leadership change. Vancil (1987, pg. 20-21) describes the effects of what he calls poor succession planning and implementation:

“But the real loser is the corporation itself, not because the linen is washed in public, but because many of the top managers are so preoccupied with the battle for succession that their productivity suffers.”

Analogous costs may also be borne from agency problems that surface as the incumbent CEO (or interim successor) manages the firm during the marathon succession process. Due to the fixed nature of their tenure, CEOs chosen to run the firm throughout the marathon succession process will have an incentive to focus only on the short-term prospects of the firm at the expense of long-run performance. Agency costs such as these are described as horizon problems, and are often examined in the literature as CEOs approach retirement.

Horizon problems are found to be alleviated by post-departure career concerns (Brickley, et al., 1999), stock based compensation (Dechow and Sloan, 1991), and the existence of monitoring through relay succession processes (Dechow and Sloan, 1991 and Naveen, 2006). However, many of the above factors are not present for incumbent CEOs and/or temporary successors during marathon successions. For example, in cases of forced turnover, incumbent CEOs who continue to manage the firm throughout the marathon process will not have the same post-departure career concerns as CEOs who leave on their own terms since their reputational capital has already been diminished by the nature of the turnover. Also, during instances where the incumbent CEO immediately departs from the firm, appointed interim successors may have the incentive to focus only on short-term performance goals in order to improve their reputational capital, given that

they are aware that they will only remain at the top post for a finite period of time. For these reasons, the threat of CEO horizon problems can be thought of as another potential cost of waiting for marathon firms.

(H3) Internal governance characteristics will be stronger for marathon firms, which will help to mitigate the possible costs associated with extending the succession process.

Costs of waiting will vary with firm characteristics and the effectiveness of internal governance mechanisms already in place. A reasonable measure of internal monitoring comes from an examination of the board of directors. When proper internal monitors are in place, it becomes easier to implement a process that prolongs the succession decision until all candidates are properly evaluated. The existence of such monitoring mechanisms will enable the firm to effectively continue current strategies as well as prepare and execute new policy while in absence of a permanent leader. Therefore, one would expect that internal governance, as measured by the characteristics of the board of directors, will be greater for firms that implement marathon successions.

2.3 Market reactions to extending the succession process

Conventional wisdom suggests that the costs of waiting have the potential to adversely affect firm performance through decreases in operational efficiencies and a loss in managerial productivity. If these expectations hold, marathon announcements will be met with disapproval and expectations of future performance will be lowered, resulting in negative abnormal returns surrounding the decision to extend the succession process. Extending the succession process may also cause the market to lower its perception of the

quality and effectiveness of the board of directors due to the board's inability to implement a timely and effective succession process, which can also result in a lowered valuation of the firm. On the other hand, if the costs of waiting are mitigated by internal factors such as the quality of the board of directors, then marathon succession announcements will be met with investor approval, as observed by positive abnormal announcement returns.

3. DATA

3.1 Sample selection

I test my hypotheses by examining a sample of turnover and succession announcements that range from 1984 to the beginning of 2005.⁴ Annual *Forbes* executive compensation surveys are used to identify top executives, their ages, as well as to determine year over year CEO changes. Turnover announcement and succession dates and the reasons for CEO departure are obtained from the *Wall Street Journal*. All observations with turnovers that pertain directly to a merger or acquisition are excluded from the sample. Overall, the sample consists of 1,247 successions for 806 large public firms.

3.2 Turnover and succession classifications

Consistent with previous work, CEO turnovers are designated as forced when (1) indicated as being so in the *Wall Street Journal*, or (2) the departing CEO is under 60 years old and the reason for the departure is not specified as being due to poor health, death, or acceptance of a new position either inside or outside the firm. In order to differentiate between succession types, I examine firm succession decisions made at the time of the turnover announcement. In cases of marathon successions, I obtain both the initial announcement and the final succession dates from the *Wall Street Journal*.

Figure 1 provides a graphical representation of each succession process. Marathon succession announcements are described as turnover events where (1) the firm does not specify an internal or external succession plan, (2) only an interim successor is

⁴ I would like to thank Robert Parrino for graciously sharing his pre-1996 firm turnover data.

announced, or (3) the firm acknowledges that both internal and external candidates will be considered for the position of CEO. Outside successions are turnover announcements associated with the appointment of an external candidate, where external candidates are defined as managers who are employed by the firm for one year or less prior to being appointed CEO. Outside succession processes are completed when the permanent successor is announced at the time of the formal turnover announcement.

Relay successions are CEO turnover announcements that coincide with a definite internal succession announcement. Relay processes begin when the departing CEO hand picks an internal successor prior to her expected departure. The two top executives work closely together over the next one to two years in order to prepare the successor to effectively takeover as CEO. The “passing of the baton” in this relay process occurs when the predecessor announces that she will be stepping down and the successor is named to the post of CEO.

An additional succession process, most often called horse race, is also occasionally used. Similar to relays, horse race successions end with the appointment of an internal candidate, generally at the time of the turnover announcement. Horse race successions differ from relays in that a number of internal candidates vie for the position of CEO, and typically the internal succession decision is not made public until the formal turnover announcement is made. I do not distinguish between relay and horse race successions in my analysis due to the fact that (1) horse race succession processes are often implemented privately by the firm and (2) the structure of relay and horse race decisions remain materially similar, in that both processes focus on internal candidates

and are completed at the time of the turnover announcement when an internal successor is chosen.

3.3 Performance, firm, and industry structure classifications

Stock performance data is obtained from the Center for Research in Security Prices (CRSP) and accounting variables are collected from Compustat and are adjusted for inflation, presented in 2005 dollar values. All accounting variables are collected for the fiscal year prior to the turnover announcement. Firm performance variables are defined as industry-adjusted return on assets (ROA) and stock performance for the year prior to the turnover announcement. Industry-adjusted ROA is defined as earnings before interest, taxes, and depreciation less its median industry ROA, as classified by two-digit Standard Industrial Classification (SIC) code.⁵ Median industry-adjusted stock returns are defined as twelve month median industry-adjusted buy-and-hold returns beginning in the month prior to the turnover announcement.

Board size, incumbent and director ownership, and board structure are collected from annual proxy statements for the year prior to the turnover. Outside directors are defined as independent, non-employee directors who have no association with the firm other than their appointment to the board. Grey directors are defined as non-employee directors who are lawyers, consultants, insurance company executives, commercial or investment bankers, former officers of the firm, or are related to an officer of the firm.

⁵ Three- and four-digit SIC have also been used in previous works. However Clarke (1989) finds little difference in the effectiveness of implementing a two-digit SIC analysis when compared to using a three- or four-digit analysis.

This classification scheme is used to separate independent officers from those who are not employed by the firm but may have other associations with the firm, and is similar to the method used in Huson et al. (2001).

Parrino's (1997) industry homogeneity measure is used to proxy for the degree of similarity across firms in a given industry and is calculated as follows. First, monthly equal-weighted industry (as measured by two-digit SIC code) returns and overall market returns are calculated over the period 1985-1994. Next, individual firm returns are regressed against (1) an industry return index and (2) the CRSP value-weighted industry return index. Lastly, mean partial correlation coefficients between the two models are calculated which yields the industry homogeneity measure. In order to account for the time varying differences in industry homogeneity, I repeat this method using a sample from 1995-2004 and match firms to the homogeneity measure by two-digit SIC and the sample period in which the turnover occurred.⁶ This measure is structured such that firms in more homogenous industries will have higher values. Parrino (1997) finds that outside successions are more likely in homogenous industries and Naveen (2006) discovers a positive relation between relay succession planning and industry heterogeneity.

Lastly, I examine firm size (as measured by the log of sales) and segment-based Herfindahl index to proxy for firm diversification. Similar to Naveen (2006), I define the

Herfindahl index as $\frac{\sum_{i=1}^T assets_i^2}{(\sum_{i=1}^T assets_i)^2}$ where $assets_i$ represents firm assets for

⁶ The median industry homogeneity measure is 0.22 when calculated from 1985-1994 and 0.26 when calculated from 1995-2004, with differences significant at the one percent level.

segment i . This index is structured such that higher values are related to lower levels of firm diversification. Naveen (2006) finds that relay succession planning is positively related to the level of firm diversification and argues that the cost of implementing an outside succession will be greater for diversified firms.

3.4 Unexpected turnover classification

A possible alternative explanation for the occurrence of marathons is that they are the result of unexpected CEO turnovers, which forces the board of directors to extend the succession process. To account for this possibility, I examine *Wall Street Journal* announcements and create a control variable that separates observations into surprise and routine turnovers. I define surprise turnovers as instances where a firm faces an external or internal shock that immediately causes/results in the departure of the CEO. Specifically, I identify a firm surprise as any turnover event that is (1) directly initiated by an outside source, (2) related to an unexpected internal or external event that causes the firm to initiate the departure within a week of the shock, or (3) related to an instance where the incumbent departs due to poor health, death, or immediate legal actions taken against her.⁷

⁷ It is important to note that the “surprise” variable identifies turnover events that are unexpected by the firm, in that they are the result of a shock occurring within a week of the turnover announcement. In other words, a turnover is considered “routine” if it is in line with the stated objectives of the firm, regardless if it is considered to be a surprise by the market.

4. METHODOLOGY AND EMPIRICAL FINDINGS

4.1 Sample characteristics and succession frequency

Controlling for turnover type, Table 1 documents the percentage of relay, marathon, and outside succession decisions throughout the sample period.⁸ Relay successions account for 79.6% of all friendly turnover decisions, but represent only 35.0% of all forced turnover successions. On the other hand, marathon successions represent the choice of over half (53.3%) of all forced turnover succession decisions from 1995-2005 and 44.2% of all such decisions throughout the entire sample period. In contrast, marathon successions only represent 10.3% and 8.8% of all friendly turnovers from 1995-2005 and 1984-2005, respectively. The higher likelihood of a marathon succession following a forced departure is consistent with the idea that firms implement marathon processes when the ability to evaluate succession candidates in a timely manner is at its lowest.

The results in Table 1 also indicate that the number of outside successions and forced turnovers have increased throughout the sample period. After accounting for final marathon succession decisions (shown in Table 2), 25.6% of all turnovers result in an outside appointment. These results are considerably higher than previous work and can be attributed to the increase in outside appointments over the second half of the sample. Outsiders were appointed 27.6% over the period 1995-2000 and represent 31.2% of all appointments from 2001-2005. The overall higher frequency of forced turnovers can also

⁸ Note that the Forbes survey decreases their executive compensation reporting from the top 800 to the top 500 firms based on market capitalization beginning in 2002. Since my turnover sample is formed through an analysis of the Forbes surveys, the overall frequency of turnovers for my post-2001 sample will be lower than the pre-2002 sample.

be attributed to the latter portion of the sample. For the period of 1995-2000, 24.4% of all turnovers are forced, while for the period 2001-2005, 32.8% of all CEO departures are the result of a forced turnover.

Table 2 presents both turnover announcement appointments and permanent successor choices for all marathon successions. Panel A shows that in cases of forced (friendly) turnover, 65.9% (43.4%) of all firms appoint an interim successor to temporarily fill the post of CEO, yet only 11.85% (8.43%) of all marathons end with the permanent appointment of an interim successor, shown in Panel B. The mean (median) period between the initial turnover announcement and the permanent succession appointment for marathon successions is 7.39 (5.71) months for forced turnovers and 6.43 (6.00) months for friendly turnovers. This illustrates that regardless of the disposition of the turnover, a significant period of time passes between the formal turnover and succession decisions of the firm. In addition, marathon successions most often end with an outsider being appointed after both forced (68.9%) and friendly (60.2%) turnovers.

4.2 Univariate results

Summary statistics related to the departing CEO, successor, and board of directors are provided in Table 3. In order to reduce the effect of outliers, all variables apart from the percentage-based Chairman of the Board characteristics and board size are provided in medians. However, statistical differences remain similar across both mean and median values.

4.2.1 Incumbent and successor characteristics

In cases of friendly turnover, incumbent CEOs for firms who implement relay successions are significantly older (64) than marathon predecessors (59) and hold the CEO position for a longer period of time (8.4 years compared to 6.3 years). In addition, within one year of the turnover announcement over 90% of all friendly relay succession firms either have the successor (44.7%) or the predecessor (46.0%) appointed to the chairman post. This evidence is consistent with the traditional illustration of the relay succession process. The incumbent CEO internally grooms an internal successor prior to her retirement and on the turnover date she “passes the baton” by officially appointing the internal successor CEO. To help facilitate a smooth succession process, the incumbent often remains Chairman for a period of time and later steps down and offers the Chairman post to the successor.

On the other hand, relay successions for forced turnovers typically do not match the predictions of their friendly turnover counterparts. Predecessor age and tenure are significantly lower than in friendly relays and are no different from that of forced marathons or outside successions. I find similar differences across marathon and outside forced and friendly succession decisions, which highlights the importance of controlling for turnover type when analyzing succession processes. Lastly, incumbent tenure levels remain low for forced marathons (4.0 years), which is significantly different at the 1% level from incumbent tenure for all friendly turnover successions, but insignificantly different from forced outside and relay incumbent tenures.

4.2.2 Internal governance characteristics

Arguably, two of the most important duties of the board of directors are the evaluation of top management and the preparation and implementation of succession decisions. An examination of the quality of internal monitors and how it relates to succession decisions allows for (1) an inspection of the effectiveness of internal decision making and (2) an examination of whether the costs of waiting can be mitigated by the quality and independence of internal monitors. I use the following measures to proxy for the effectiveness of internal governance and describe its relation to efficient monitoring below.

(1) Board size: The number of directors on the board is found to be an important factor influencing the value of the board of directors as a whole. Jensen (1993) argues that board effectiveness is a decreasing function of board size due to the free rider problem that may present itself for large boards. Yermack (1996) finds evidence supporting this prediction, documenting an inverse relation between board size and firm value and concluding that smaller boards are better monitors. However, Coles et al. (2007) find that complex firms are more likely to benefit from employing larger boards. Specifically they argue that large, diversified (as measured by operating segments), highly levered firms require greater advising and therefore stand to benefit from large boards. Therefore, I include proxies for size, diversification, and leverage when analyzing the relation between succession choice and governance characteristics in order to control for the fact that efficient board size may be an *increasing* function of these

factors. For example, if marathon firms tend to hold these characteristics then a larger board may indicate better governance.

(2) Board ownership: Theories of ownership structure such as Jensen and Meckling (1976) explain how increased levels of ownership can help to control agency costs between management and shareholders. Consistent with these predictions, works such as Morck et al. (1988) and McConnell and Servaes (1990) find an increasing (but nonlinear) relation between firm performance and insider shareholdings. To the extent that no succession group has median board ownership exceeding 3% (shown in Panel B of Table 3), I assume a positive relation between ownership and the effectiveness of internal governance.

(3) The percentage of outside directors: Weisbach (1988) finds that firms with outsider dominated boards tend to have a higher sensitivity to both accounting and market performance measures when considering executive turnover decisions. Works such as Borokhovich et al. (1996) and Huson et al. (2004) find that post-turnover improvements in firm performance are positively related to the existence of an outside dominated board of directors. These results suggest that independent boards are better monitors.

(4) Separate chairman/chief executive officer appointments: Implementing managerial structure decisions that separate chairman and CEO appointments can facilitate better internal monitoring, which can decrease agency costs between management and shareholders. Jensen (1993, pg. 866) outlines the potential conflicts of interest associated with single CEO/Chairman appointments:

“Clearly, the CEO cannot perform [monitoring duties] apart from his or her personal interest. Without the direction of an independent leader, it is much more difficult for the board to perform its critical function.”

Consistent with this argument, Goyal and Park (2002) find that the sensitivity of firm performance to turnover is greater for firms who separate chairman and CEO appointments.

The influence of the incumbent (or interim) CEO will also be diminished in the presence of dual CEO and chairman appointments. The existence of a separate Chairman allows for an additional leader who, by definition, is responsible for facilitating board monitoring which takes extensive knowledge of firm policy and operations. As a result, horizon problems and the costs of waiting can be alleviated in the presence of dual chairman and CEO appointments.

Univariate analysis on differences in governance characteristics across turnover and succession decisions is provided in Panel B of Table 3. In cases of forced turnover, firms implementing marathon successions have larger outside dominated boards (60.0%) than both relay (57.1%) and outside succession firms (55.6%), with differences significant at the 1% level. Firms implementing forced marathons are also more likely to have separate chairman and CEO appointments prior to the turnover when compared to firms who apply friendly marathon, outside, relay (all at the 1% level) and forced outside successions (at the 5% level). Lastly, forced marathon firms have smaller boards when compared to friendly relay firms (at the 1% level). These findings provide support for hypothesis 3; effective internal governance structures aid in the implementation of marathon succession decisions in cases of forced turnover.

4.2.3 Firm performance and industry characteristics

Pre-turnover accounting performance, market performance, and industry characteristics are provided in Table 4. Consistent with previous work, poor firm and accounting performance is observed prior to forced turnovers across all succession decisions.⁹ Univariate results also suggest that firms that implement marathon decisions tend to perform worse than relay and outside firms, irrespective of the disposition of the turnover. Average twelve month buy-and-hold returns prior to the turnover for friendly marathon succession firms is significantly worse than friendly relay (at the 1% level) and outside (at the 5% level) succession firms, but statistically higher (at the 1% level) than that of forced marathon firms. Lastly, the results from Panel B show little variability in firm and industry level characteristics across turnover and succession decisions. However, I turn to multivariate analysis for a more complete test of my hypotheses.

4.3 Succession implementation decisions

Table 5 provides multivariate evidence on the determinants of succession implementation through the use of a multinomial logistic framework. Controlling for turnover, the dependent variable is separated by succession type.¹⁰ Year dummy variables are used to control for the increased frequency of marathon successions over the

⁹ For example, see Warner, et al. (1988), Coughlan and Schmidt (1985) for evidence on market performance and Denis and Denis (1995) and Huson et al. (2004) for accounting performance.

¹⁰ Traditional friendly turnover relay successions are treated as the base case in Table 5. Previous work often compares instances of no turnover to turnover samples in multinomial logistic models when examining turnover and succession decisions. However, utilizing friendly relays is more appropriate for my analysis since I examine succession choice conditional on a turnover event occurring and friendly relay successions are overall, one of the most prominent forms of CEO turnover.

sample period. Panel A provides coefficient estimates while Panel B provides marginal effects.

The decision to implement a CEO change can be made by the board of directors, the incumbent CEO, and/or an outside source. However, other firm factors, including governance characteristics, can be potentially influenced by the same forces that implement the turnover. To alleviate these concerns I examine lagged independent variables for the year $t-1$ relative to the turnover event for my analysis. This reduces the likelihood that the governance characteristics I use are jointly determined by the same forces that implement the turnover and succession decisions.

Consistent with the hypothesis that governance structures will be stronger in cases of forced marathon successions (hypothesis 3), Table 5 reports significant coefficients on almost all internal governance proxies after controlling for firm size, unexpected turnover, organizational structure, industry structure, and firm performance as measured by both stock and accounting returns. Specifically, I find positive and significant coefficients on board ownership (at the 10% level) and the percentage of outside directors (at the 1% level), and negative and significant coefficients on board size (at the 5% level) and the likelihood that the incumbent was also chairman (at the 1% level) when using returns as a measure of performance. Due to the high correlation across performance variables, I separately incorporate accounting performance into the Table 5 regression and find similar results. The only major difference is that the coefficient on board size remains positive, but insignificant, for forced marathon successions. Overall, these

results indicate a strong relation between the quality of internal monitoring mechanisms and propensity to engage in marathon successions after forced turnovers.¹¹

In addition, I find negative and significant coefficients (at the 1% level) on forced marathon incumbent tenure, which is consistent with hypothesis 1, in that firms are more likely to choose marathon successions after early CEO terminations. Forced relay and outside succession firms are also found to have shorter incumbent tenures, although, little support is found suggesting that superior governance structures are in place for these firms. Taken together, these results suggest that firms that are most likely to benefit from extending the succession process *and* who have the necessary internal governance structure in place to mitigate the costs of waiting are more likely to implement marathon succession decisions.

Multivariate results also suggest that the likelihood of implementing a friendly marathon or outside succession process is positively related to founding family firm decisions. Founding family firms are identified as companies that have a departing CEO who is related to, or is a founding member of the firm. Founding family firms are often thought of as having no formal succession plan in place (Vancil, 1987), which is consistent with the finding that these firms look for outside successors and/or extend the succession process when the departure of a founder or member of the founding family becomes imminent. I also find positive and significant (at the 1% level) coefficients on

¹¹ In results not shown, I add leverage to the analysis of Table 5 in order to control for Coles et al. (2007) finding that larger, highly levered firms with complex operations are more likely to benefit from larger boards. I do not find a positive relation between all three of these factors and the likelihood to implement any given succession type and the results presented in Table 5 remain unchanged. Therefore, although larger boards may be appropriate for some firms in my sample, I do not assume that larger boards will be better monitors for any particular group of firms (separated by succession type) in my sample.

the surprise turnover controls for both forced and friendly marathons as well as for forced relay and outside successions. This indicates that forced turnovers, regardless of succession type, and inside marathon successions are positively related to internal or external shocks/surprises to the firm just prior to the turnover.

Interestingly, I find little support indicating that the level of operational complexity or industry structure is related to the likelihood of implementing one succession decision over another. Coefficients on both the industry homogeneity measure as well as the Herfindahl index remain insignificant across all forms of turnover and succession decisions. Also, multivariate evidence suggests that forced turnover marathon firms tend to be larger in size, as measured by the log of sales. These findings are in contrast with those of Naveen (2006), who finds a positive relation between the likelihood to implement a relay succession and firm size, industry heterogeneity, and diversity of operations. One explanation for these results is that firms identified by Naveen as implementing relay processes are more likely to initiate such a process, but the likelihood that they complete the relay succession is based on other factors.

The insignificant relation between industry homogeneity and turnover succession decisions also differs from the findings of Parrino (1997), who finds that the likelihood of implementing an outside succession is positively related to the level of industry homogeneity. These differences may be driven by model structure and/or the time varying effectiveness of the industry homogeneity proxy. Specifically, Parrino examines the overall choice of inside versus outside appointments while my analysis examines the

succession process as a whole. Therefore, I do not directly examine inside versus outside decisions since marathon successions can result in either choice.

In addition, the stock-based industry homogeneity measure may have become less significant over time due to the changing relation between firm and industry level stock returns. General increases in risk management activity and cash holdings, as well as increased levels of stock market volatility in the late 1990s have all influenced the relation between firm and industry returns. These effects are unrelated to the level of similarity across firms within a given industry and will add noise to the stock-based industry homogeneity proxy.

In order to further study whether any observable industry relation exists for marathon succession decisions, I examine industry level turnover and succession frequencies, as measured by firm two-digit SIC code, in Table 6. The percentage of sample columns shows the proportion of industry observations as a percentage of the entire sample of successions. For example, firms operating in Electric, gas, and sanitary services (SIC code 49) represent 9.22% of the entire sample of marathon successions and represent 10.40% and 9.45% of the entire samples of outside and relay successions, respectively. Similarly, the percentage forced columns document the proportion of forced turnovers within a given industry and succession type.

Surprisingly, the percentage of successions by industry remains fairly constant across marathon, outside, and relay types. Maximum deviations across succession processes are no greater than four and a half percentage points, which suggests that industry structure does not have a large influence on the likelihood of implementing one

succession process over another. However, the percentage of marathon forced turnovers almost always exceed that of outside and relay successions, which is not surprising given the high frequency of forced turnover marathon successions.

4.4 Performance throughout the marathon process

Potential costs associated with extending the succession process, outlined in hypothesis 2, can be viewed as increases in stock return volatility surrounding the period between the marathon initial turnover and final succession decisions. In addition, extending the succession process through the use of a marathon can lead to horizon problems for CEOs who are chosen to lead the firm until a permanent successor is appointed. Due to the short-term nature of their appointment, these leaders may have the incentive to focus on immediate firm performance at the expense of long-term firm prospects.

4.4.1 Stock returns and volatility surrounding marathons

In order to test the above predictions, I first examine changes in firm performance and stock return volatility surrounding turnover and succession announcements in Table 7. Stock return volatility levels are calculated as the annualized standard deviation of daily returns over each event period. Market-adjusted volatility is defined as the annualized standard deviation of CRSP value-weighted index adjusted daily returns over each event period. The pre-turnover period for volatility represents the 120 trading day period leading up to three days before the initial turnover announcement. The post-

turnover period for volatility and returns represents the 120 trading day period beginning three days after the initial turnover announcement for relay and outside succession firms and the period from three days after the initial turnover announcement to three days before the final succession decision announcement for marathon succession firms.¹²

If hypothesis 2 holds, post-turnover volatility levels will be significantly higher for marathon firms when compared to (1) pre-turnover volatility levels and (2) post-turnover volatility levels for relay and outside firms, controlling for turnover type. Results from Panel A show that there is no significant difference between the immediate pre- and post-turnover volatility levels for any succession choice, regardless of turnover type and market adjustment.¹³ In addition, there is no statistical difference between forced post-turnover volatility levels across any succession decision. However, friendly relay successions have significantly (at the 1% level) lower post-turnover volatility levels compared to both friendly marathon and outside successions. Therefore, other than in the case of traditional friendly relay successions, post-turnover marathon volatility levels are statistically no higher than volatility levels for relay or outside firms.

At first glance, the finding that volatility levels remain the same throughout the pre- and post-turnover periods seem to differ from Clayton et al. (2005), who find that post-turnover levels volatility levels increase for forced turnover and outside succession firms. However, I choose a considerably shorter event range to examine return volatility

¹² I use a 120 day trading period to calculate post-turnover volatility and returns for relay and outside firms in order to compare them to the volatility and returns over the period between the initial turnover and final succession decision for marathons, which lasts an average of six months.

¹³ In results not shown, I separate marathon firms by their temporary appointment type (similar to Table 2), and examine volatility levels within each type. Although some volatility levels differ across types, similar to the findings presented in Panel A of Table 7, pre- and post-turnover volatility levels remain similar within types.

in order to test the level of uncertainty surrounding marathon successions, where Clayton et al. (2005) chose an event range that spans four years surrounding the turnover announcement (from t-500 to t-1 and t+1 to t+100 relative to the event date). In results not shown, I calculate volatility levels over the four years surrounding the turnover announcement and find similar results to Clayton et al. (2005) for forced turnover and outside successions.

Panel B examines buy-and-hold returns covering the period between the initial turnover and final succession decisions for marathon firms and the 120 trading day post-turnover period for both relay and outside firms. Similar to the results of Panel A, there is little difference in characteristics across each succession decision, controlling for turnover type. The only notable variation is that forced outside succession post-turnover returns are significantly lower (at the 10% level) than forced marathon returns. Overall, the results of Table 7 do not support the predictions of hypothesis 2; when compared to relay and outside successions, marathon successions do not seem to negatively affect firm returns or increase volatility levels over the period between the initial turnover and final succession decision.

4.4.2 Horizon problems and marathons

Table 8 presents multivariate results on the relation between succession choice and horizon problems. Similar to works such as Dechow and Sloan (1991) and Naveen (2006), I use changes in research and development (R&D) and capital expenditures (CAPEX) to proxy for the effects of horizon problems. Specifically, I use changes in

R&D and CAPEX (scaled by total assets) measured from year t-1 to t+1 to proxy for the effect of horizon problems. I also use industry adjusted changes in R&D and CAPEX as dependent variables in my analysis in order to ensure that my results are not driven by over-investment by poor managers during the period prior to turnover. If horizon problems are persistent for firms who choose a given succession choice, then changes in R&D and/or CAPEX will be negatively related to the likelihood of the succession decision.

I use an ordinary least squares approach for the change in CAPEX model and a Tobit approach for the change in R&D model due to high number of zero R&D investment firms. Independent variables include dummy variables for the succession decision and controls for firm size (log of sales), diversification (Herfindahl index), and industry structure (homogeneity measure). Additional independent variables include industry-adjusted returns for the two years surrounding the turnover announcement and the change in industry adjusted ROA over the same period. Similar to Naveen (2006), I also include firm market to book ratio (the market value of assets divided by the book value of assets), leverage (total book debt divided by the book value of assets), and cash holdings (scaled by assets) to control for its influence on R&D and CAPEX.

Inconsistent with the predictions of hypothesis 2, I find an insignificant relation between the use of a marathon and changes in R&D and CAPEX. However, I do find negative and significant coefficients on forced outside and relay successions for changes in CAPEX, which indicates that these firms decreased CAPEX spending after forced turnovers. However, results suggest that forced outside succession firms increase R&D

expenditures after the turnover event. Overall, the results of Table 8 provide some evidence that horizon problems exist for forced turnover relay and outside firms, but these agency costs do not seem to be persistent for marathon firms.

4.5 Market reactions surrounding turnover and succession decisions

I next examine market reactions to each succession choice, conditional on the disposition of the turnover. One would expect negative abnormal returns surrounding marathon succession announcements if the costs of waiting are high and market perceptions of the effectiveness of the board of directors is low. On the other hand, if the costs of waiting are mitigated then market reactions to marathon successions will be positive.

Empirical evidence on the market's reaction to CEO turnovers yield mixed results. For example, Warner et al. (1988) find no abnormal returns surrounding all top managerial turnover events, while Reinganum (1985) discovers significant positive abnormal returns for a sub sample of small firm turnover announcements where external successors are appointed. In contrast, both Furtado and Rozeff (1987) and Weisbach (1988) find significant positive abnormal returns for their entire sample of turnovers.

One factor that may contribute to the variability across these findings is that often only ex post succession decisions are examined, which may not gauge market reactions to the structure and timeliness of the succession announcement.¹⁴ Additionally, previous

¹⁴ For example, the CEO of Coca-Cola, Douglas Daft, formally announced his retirement on February 20, 2004 stating that the board would conduct a search for his replacement and that he would remain with the firm until the successor was chosen. It was not until May 5, 2004 that Coca-Cola chose former senior executive, E. Neville Isdell as their successor. Previous research would have only analyzed one of these

work either excludes from their sample any turnover events where an interim successor is announced, or analyzes interim successions as if they are no different from permanent appointments. By adjusting for marathon turnover and succession decisions, I am able to utilize a more complete measure of total returns to examine the markets reaction to turnover *and* succession decisions.

Consistent with previous work, I use an event study methodology in order to measure market reactions to firm turnover and succession decisions. I first limit my sample to include only observations with “clean” event windows, where no other significant announcements are reported in Wall Street Journal during the four days surrounding the event date. Next, market model returns are calculated using the CRSP Value Weighted Index from days -210 to -60 prior to each announcement date. Cumulative abnormal returns (CARs) for each initial turnover announcement as well as for final marathon succession decision announcements are provided in Table 9.

4.5.1 Initial turnover announcement abnormal returns

Panel A provides three day CARs for all succession decisions, controlling for turnover type. In cases of friendly turnover, announcement returns for the entire sample and outside appointments are insignificant from zero. Abnormal returns are positive (0.36%) and significant at the 5% level for relay succession announcements, which is inconsistent with the predictions of works such as Vancil (1987), who argue that relay succession announcements are so frequently implemented that they are considered to be

dates, ignoring the turnover or succession announcement as well as the implications associated with prolonging the succession process.

“non events” in the market. The market reacts negatively (-1.88%) to the announcement of friendly marathon turnover announcements, which is significant at the 5% level. These findings suggest that, in cases of friendly turnover, the market is more likely to reward firms who successfully plan for *and* execute traditional relay succession processes.

However, I observe nearly opposite market reactions to forced turnover succession announcements. Consistent with previous work, I document positive abnormal returns for the entire sample of forced turnovers (2.50%) and outside successions (4.94%) which are both significant at the 1% level. Forced marathon turnover decisions yield positive (3.38%) and statistically significant (at the 1% level) abnormal returns, where forced relay successions are insignificant from zero. These previously undocumented market reactions to marathon turnovers are consistent with the idea that marathons are value increasing activities in instances where the benefits associated with extending the succession process is at its highest.

4.5.2 Surprise and Routine turnover announcement abnormal returns

Next, I incorporate the surprise factor into the CAR analysis of Table 9. If the majority of turnovers for a given set of successions are due to surprise events, then market reactions may be due to the unexpected turnover and not necessarily the succession decision. For example, if forced marathons are largely associated with surprise turnovers, then the positive announcement affects may be due to the market reacting to the surprise forced turnover and not the choice of implementing a marathon

succession. To test this prediction, I separate initial turnover announcement abnormal returns into surprise and routine samples, shown in Panels B and C. If abnormal returns hold for surprise, but not for routine turnovers then it may be that the market is reacting to the turnover and not the succession choice.

Interestingly, I find that *routine* forced turnover marathon succession announcements are associated with positive and significant (at the 1% level) market reactions. These results indicate that positive market reactions to marathon successions found in Panel A of Table 9 are not the result of unexpected turnovers. These findings also hold for routine forced outside and friendly relay successions. However, market reactions to surprise forced turnover marathon and outside successions are positive, but insignificant. This may be due to the smaller sample of surprise forced marathon (28 observations) and outside successions (11 observations).

On the other hand, I find negative and significant returns for friendly turnover *surprise* marathon successions and insignificant returns for routine friendly marathons. These findings indicate that in cases of friendly turnover, the market may be reacting to the unexpected turnover and not the fact that the firm uses a marathon succession. In addition, surprise friendly marathons represent over half of all friendly marathons, which indicate that the firm may be implementing a marathon based only on the fact that the turnover was unexpected. These results help to explain why friendly marathon characteristics do not match those of their forced turnover counterparts.

4.5.3 Marathon succession resolution abnormal returns

As shown in Table 2, the average period between the initial turnover announcement and final succession decision exceeds six months for both forced and friendly marathons. Therefore, market returns surrounding marathon turnover announcements (shown above) can be attributed to both reactions to both (1) the turnover announcement and (2) the succession choice, where reactions to the marathon succession decision announcement can be attributed to the final succession choice alone. I examine market reactions to marathon succession decisions in Panel D of Table 9.¹⁵

Overall, the results of Panel D suggest that the market rewards firms for completing the succession process. Friendly marathon succession decision announcements yield positive (2.21%) and significant (at the 5% level) abnormal returns. However, these positive returns are driven by outside appointments which provide significant (at the 1% level) abnormal returns of 3.30%. Similar to friendly turnovers, marathon succession decision announcements yield significant (at the 1% level) positive abnormal returns of 3.44% for the entire sample of forced turnovers. Abnormal returns also seem to be driven by the reaction to outside appointments which provide positive significant (at the 1% level) returns of 4.43%.

4.5.4 Multivariate analysis of turnover and succession announcement CARs

As noted above, CARs included in Table 9 are verified to be unrelated to any other significant announcements during the four trading days surrounding the event date.

¹⁵ Note that the number of observations used to calculate abnormal returns differ in cases of marathon turnover and marathon final succession announcements. This is due to the fact that in some instances only turnover announcements are found to be “clean” and vice versa, resulting in an unequal number of marathon turnover and marathon final succession observations.

However, additional firm or industry characteristics may influence abnormal returns surrounding the turnover and succession announcements. For example, if the incumbent had been particularly ineffective during his tenure, then the market may react favorably to the announcement of his departure regardless of the structure of the succession decision. To control for these effects, Table 10 provides evidence from multivariate regressions on the relation between announcement CARs and succession decisions.

Model 1 examines the relation between initial turnover announcement CARs and turnover event succession decisions, controlling for unexpected turnovers and prior year firm performance as measured by industry-adjusted 12 month stock returns and industry-adjusted ROA for the fiscal year prior to the turnover. Consistent with the findings of Table 9, forced turnover marathon and outside succession decisions are positively related (at the 5% and 1% levels) to event range CARs, where friendly turnover marathon succession decisions are negatively related (at the 5% level) to event range CARs. These results hold after also controlling for firm size (log of sales), diversification (Herfindahl index), and industry structure (industry homogeneity measure), shown in Model 2.

Models 3 and 4 examine marathon succession resolution CARs and final succession decisions. Similar to the findings in Panel D of Table 9, a positive relation exists between succession resolution CARs and the decision to appoint an external candidate to the post of CEO. These results hold for both instances of forced (significant at the 5% and 10% levels) and friendly (both significant at 5% levels) turnover, after controlling for all of the above factors. Overall, the results in Table 10 suggest that the

announcement abnormal returns documented in Table 9 are robust to multivariate controls and are not completely driven by the above control variables.

4.6 Alternative specifications and robustness tests

4.6.1 The effect of market and industry performance on CEO succession

I use industry adjusted returns as a control for the likelihood of forced turnover in Table 5, however Jenter and Kanaan (2006) find evidence that poor industry and market returns also affect the likelihood of forced turnover. Specifically, they conclude that monitors sometimes fail to filter out exogenous shocks when implementing CEO turnover decisions. In a similar manner, it may be that industry and/or market performance also has an influence on the likelihood on choosing one succession plan over another. To test this prediction, I revisit my analysis of Table 5 and calculate unadjusted firm, median industry, and overall market buy-and-hold 12 month returns ending one month before the turnover announcement. Median industry returns are separated by two-digit SIC code and CRSP value weighted index returns are used for overall market returns.

In results not shown, I reexamine the analysis of Table 5 using (1) unadjusted firm and median industry returns and (2) unadjusted firm and overall market returns as controls.¹⁶ Similar to the industry adjusted return coefficients of Table 5, I find strong significance on the unadjusted return coefficients for all forced turnover succession

¹⁶ This test is similar to Jenter and Kanaan's (2006) "weak-form relative performance evaluation" test. Specifically, Jenter and Kanaan (2006) use a logit specification to regress forced turnover on individual firm performance and industry (or market) performance.

decisions and friendly marathon successions for both industry and market specifications. The only instances where I find significance for industry or market returns are for friendly relay and forced outside turnovers. Specifically, I find positive and significant coefficients on the industry return coefficient for friendly relays and the market return coefficient for forced outside turnovers, respectively. In addition, all other significance levels remain the same for both models when compared to those shown in Table 5.

4.6.2 Model structure and succession choice

Recall that the model specifications of Tables 8 and 10 are such that one turnover event succession choice must be excluded from the regression in order to obtain identification. Therefore, a potential concern is that the choice of exclusion (i.e. the decision to exclude one dummy variable over another) may be driving the results found for the remaining turnover event succession dummies. To address this potential issue, I follow the method provided by Gardeazabal and Ugidos (2004). Specifically, I place a normalization restriction on the set of turnover event succession decision dummy variables, which allows identification of the individual turnover event succession choice dummy variables.

I first revisit my analysis on the relation between succession choice and horizon problems by incorporating the normalized succession choice dummies into the regressions of Table 8. Overall, the findings for changes in R&D remain the same, but the negative relation between changes in unadjusted/adjusted CAPEX and implementing a forced relay and outside succession are no longer significant. Second, I reexamine the

multivariate regressions on the relation between announcement CARs and succession decisions from Table 10. Taken as a whole, all results hold for Models 1 and 2 and the only differences in Models 3 and 4 are that the friendly (forced) outside marathon succession resolution choice remain positive, but lose significance in Model 3 (Model 4). Therefore, the general results that marathon successions do not increase the likelihood of horizon problems and that the market reacts positively to forced marathon succession announcements still hold for this specification.

5. CONCLUSIONS

This paper documents a previously unexamined succession process using a hand collected dataset consisting of over 1,200 CEO successions ranging from 1984 to 2005. Specifically, I study marathon successions, which I define as CEO turnover announcements that do not coincide with a permanent successor being chosen. Marathon successions have nearly doubled in frequency over the last ten years and now represent the majority (53%) of all succession decisions surrounding forced turnovers.

I also examine which firms are more likely to benefit from extending the succession process and how the costs of waiting associated with marathon successions can be mitigated with the existence of strong internal governance. Benefits of marathons arise from the ability to extend the evaluation period of a succession. The benefits of extending the succession process will be at its highest when the availability to monitor and evaluate both inside and outside candidates are at its lowest. Hermalin (2005) argues that the pool of internal candidates will not be prepared for succession after untimely forced turnovers and Vancil (1987) and Charan (2005) argue that a firm must identify and begin to prepare a successor as early as two to three years prior to the turnover announcement in order to execute an effective succession plan. Consistent with these predictions, I find that marathon successions are more likely in cases of forced turnovers where the incumbent's tenure remains short. Implementing such a decision allows for an additional period of time in order to evaluate the quality of both internal and external candidates.

Costs of waiting in marathon successions are borne from the separation of the turnover from the succession decision. Critics of marathon successions argue that operational efficiencies and long term strategic planning will be damaged from implementing such a decision. In addition, agency costs in the form of horizon problems may be present for the executives who hold the CEO post throughout the marathon process. However, I find little support for these predictions. The level of uncertainty, as measured by stock return volatility, surrounding forced turnover marathon succession announcements is statistically no different than that of forced relay or outside decisions. Similarly, multivariate results suggest that horizon problems, as measured by decreases in R&D and CAPEX, are not prevalent for firms who implement marathon successions.

In addition, I find evidence suggesting that internal monitoring mechanisms may be greater for forced turnover marathon firms. In multivariate analysis, I find significant coefficients on nearly all internal governance proxies for forced marathon firms after controlling for firm size, organizational structure, industry structure, and firm performance as measured by both stock and accounting returns.

Lastly, I observe positive and significant CARs surrounding forced turnover marathon succession announcements, which indicates that the market rewards firms for implementing marathons when (1) extending the succession process is found to be beneficial and (2) costs of waiting are more likely to be controlled for. Taken together, these results suggest that firms that are most likely to benefit from extending the succession process *and* have the necessary internal governance structure in place to

mitigate the costs associated with extending the succession process are more likely to implement marathon succession decisions.

REFERENCES

- Borokhovich, K.A., R. Parrino, and T. Trapani, 1996. Outside directors and CEO selection. *Journal of Financial and Quantitative Analysis* 31, 337-355.
- Brickley, J., J. Link, and J. Coles, 1999. What happens to CEOs after they retire? New evidence on career concerns, horizon problems, and CEO incentives. *Journal of Financial Economics* 52, 341-377.
- Charan, R., 2005. Ending the CEO succession crisis. *Harvard Business Review* 83, 72-81.
- Clarke, R.N., 1989. SICs as delineators of economic markets. *Journal of Business* 62, 17-31.
- Clayton, M.J., J.C. Hartzell, and J. Rosenberg, 2005. The impact of CEO turnover on firm volatility. *Journal of Business*, 78, 1779-1808.
- Coles, J.L., N.D. Daniel, and L. Naveen, 2007. Boards: Does one size fit all? *Journal of Financial Economics*, forthcoming.
- Coughlan, A.T., and R.M. Schmidt, 1985. Executive compensation, management turnover, and firm performance: an empirical investigation. *Journal of Accounting and Economics* 7, 43-66.
- Dechow, P., and R. Sloan, 1991. Executive incentives and the horizon problem. An empirical examination. *Journal of Accounting and Economics* 14, 51-89.
- Denis, D.J., and D.K. Denis, 1995. Firm performance changes following top management dismissals. *Journal of Finance* 50, 1029-1057.
- Furtado, E.P.H., and M.S. Rozeff, 1987. The wealth effects of company initiated management changes. *Journal of Financial Economics* 18, 147-160.
- Gardeazabal, J. and A. Ugidos, 2004. More on identification in detailed wage decompositions. *The Review of Economics and Statistics*, 86, 1034-1036.
- Gibbons, R. and K. Murphy, 1992. Optimal incentive contracts in the presence of career concerns: theory and evidence. *Journal of Political Economy* 100, 468-505.
- Goyal, V.K., and C.W. Park, 2002. Board leadership structure and CEO turnover. *Journal of Corporate Finance* 8, 49-66.

- Hermalin, B., 2005. Trends in Corporate Governance. *Journal of Finance* 60, 2351-2384.
- Huson, M.R., R. Parrino, and L.T. Starks, 2001. Internal monitoring mechanisms and CEO turnover: a long-term perspective. *Journal of Finance* 56, 2265-2297.
- Huson, M.R., P.H. Malatesta, and R. Parrino, 2004. Managerial succession and firm performance. *Journal of Financial Economics*, 74, 237-275.
- Hymowitz, C., and J.S. Lubin, McDonald's CEO Tragedy Holds Lessons. *Wall Street Journal*, April 20, 2004.
- Jensen, M.C., 1993. The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance* 48, 831-880.
- Jenter, D. and F. Kanaan, 2006. CEO turnover and relative performance evaluation. Working Paper, MIT Sloan School of Management.
- McConnell, J.C., and H. Servaes, 1990. Additional evidence on equity ownership and corporate value. *Journal of Financial Economics* 27, 595-612.
- Morck, R., A. Shleifer, and R.W. Vishny, 1988. Management ownership and market valuation: An empirical analysis. *Journal of Financial Economics* 20, 293-315.
- Naveen, L., 2006. Organizational complexity and succession planning. *Journal of Financial and Quantitative Analysis* 41, 661-683.
- Parrino, R., 1997. CEO turnover and outside succession: a cross-sectional analysis. *Journal of Financial Economics* 46, 165-197.
- Reinganum, M.R., 1985. The effect of executive succession on stockholder wealth. *Administrative Science Quarterly* 30, 46-60.
- Terhune, C., Coke's CEO to Retire at Year End. *Wall Street Journal*, February 20, 2004.
- Terhune, C., and J.S. Lublin, Coca-Cola Considers 4 Outsiders as Search for New CEO Intensifies. *Wall Street Journal*, April 9, 2004.
- Vancil, R., 1987. *Passing the Baton: Managing the Process of CEO Succession*. Harvard Business School Press, Boston.
- Warner, J.B., R.L. Watts, and K.H. Wruck, 1988. Stock prices and top management changes. *Journal of Financial Economics* 20, 461-492.

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

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

Table 1
Turnover frequency controlling for succession decision

Firm tenure changes are obtained from an examination of the Forbes CEO Compensation Survey, which outlines Chief Executive characteristics for the top 800 publicly traded corporations as measured by market capitalization annually from 1984-2000 and the top 500 publicly traded corporations from 2001-2005. Turnover announcement dates and specific reasons for CEO departure are obtained from the Wall Street Journal. Changes in firm management are designated as being forced when (1) specifically indicated as being so in the Wall Street Journal or (2) the departing CEO is under 60 years old and the reason for the departure is not specified as being due to poor health, death, or the acceptance of a new position either inside or outside the firm. Marathon succession announcements are defined as turnover events where (1) the firm does not specify an internal or external succession plan, (2) only an interim successor is announced, or (3) the firm acknowledges that both internal as well as external candidates will be considered for the position of CEO. Outside successors are defined as managers or who are employed by the firm for one year or less before being appointed CEO. Relay successions are defined as turnover announcements that coincide with a definite internal succession announcement. Note that the end of the sample is limited to turnovers that occur during the first quarter of 2005.

Years	Forced Turnovers				Friendly turnovers			
	Marathon	Outside	Relay	Total	Marathon	Outside	Relay	Total
1984-1986	24.14%	37.93%	37.93%	29	3.65%	7.30%	89.05%	137
1987-1989	29.55%	40.91%	29.55%	44	7.83%	9.64%	82.53%	166
1990-1992	42.86%	26.19%	30.95%	42	10.89%	13.86%	75.25%	101
1993-1995	48.57%	17.14%	34.29%	35	7.64%	12.10%	80.25%	157
1996-1998	43.90%	12.20%	43.90%	41	11.45%	12.98%	75.57%	131
1999-2001	60.34%	6.90%	32.76%	58	7.33%	14.67%	78.00%	150
2002-2005	50.00%	11.11%	38.89%	54	15.69%	11.76%	72.55%	102
Total	134	63	106	303	83	110	751	944

Table 2
Marathon succession characteristics

Marathon succession announcements are defined as turnover events where (1) the firm does not specify an internal or external succession plan, (2) only an interim successor is announced, or (3) the firm acknowledges that both internal as well as external candidates will be considered for the position of CEO. CEO turnovers are designated as being forced when (1) specifically indicated as being so in the Wall Street Journal or (2) the departing CEO is under 60 years old and the reason for the departure is not specified as being due to poor health, death, or the acceptance of a new position either inside or outside the firm. Specific reasons for turnover as well as temporary and permanent marathon succession characteristics are obtained from the Wall Street Journal. All values, other than the period between turnover and succession announcements, are provided as a percentage of the sample.

Panel A: Marathon Turnover Announcement Characteristics

	<u>Forced Turnover</u>	<u>Friendly Turnover</u>
Interim Successions		
Internal interim successor appointed	36.30%	22.89%
External interim successor appointed	25.19%	12.05%
Group interim successor	4.44%	8.43%
Incumbent remains until successor is chosen	28.89%	45.78%
CEO post remains vacant	5.18%	10.85%
Total observations	<u>135</u>	<u>83</u>

Panel B: Marathon Permanent Succession Characteristics

	<u>Forced Turnover</u>	<u>Friendly Turnover</u>
Average (median) number of months between turnover and succession announcements	7.39 (5.71)	6.43 (6.00)
Permanent Appointments		
Internal interim successor appointed	9.63%	7.23%
External interim successor appointed	2.22%	1.20%
Other internal successor appointed	19.26%	31.33%
Other external successor appointed	68.89%	60.24%
Total observations	<u>135</u>	<u>83</u>

Table 3**Firm, departing CEO, and successor characteristics**

Summary statistics for CEO turnover succession decisions from 1984 to the first quarter of 2005. The departing CEO age, tenure, successor age, and Chairman of the Board characteristics are obtained from the Forbes CEO Compensation Survey or Wall Street Journal. Board characteristics and executive ownership variables are pulled from annual proxy statements for the year prior to the turnover event. In order to reduce the affect of outliers, all variables other than board size and Chairman of the Board characteristics are provided in medians. Chairman of the Board characteristics and board size are provided in means. p-values for two-tailed tests of differences in means (or distributions, when appropriate) are provided adjacent to the characteristics.

Panel A: Incumbent and Successor Characteristics									
	Marathon Successions			Outside Successions			Relay Successions		
	Forced	Friendly	p-value	Forced	Friendly	p-value	Forced	Friendly	p-value
Incumbent age	55.00 (135)	59.00 (83)	0.00	55.00 (62)	63.00 (110)	0.00	55.00 (107)	64.00 (751)	0.00
Successor age	51.00 (135)	52.00 (83)	0.40	52.50 (62)	51.50 (110)	0.19	52.00 (107)	52.00 (751)	0.94
Incumbent tenure (in years)	4.00 (135)	6.33 (83)	0.01	4.29 (62)	7.00 (110)	0.01	4.33 (107)	8.42 (751)	0.00
Incumbent remains Chairman for at least one year (%)	2.22% (135)	12.05% (83)	0.01	9.67% (62)	42.73% (110)	0.00	9.34% (107)	44.74% (751)	0.00
Successor is appointed Chairman within one year (%)	53.39% (118)	52.94% (68)	0.95	60.65% (62)	45.46% (110)	0.06	56.19% (105)	45.98% (746)	0.05

Panel B: Governance Characteristics

	Marathon Successions			Outside Successions			Relay Successions		
	Forced	Friendly	p-value	Forced	Friendly	p-value	Forced	Friendly	p-value
Incumbent ownership stake (%)	0.40% (121)	0.43% (81)	0.94	0.31% (58)	0.43% (99)	0.12	0.41% (101)	0.34% (719)	0.27
Director ownership stake (%)	1.73% (121)	2.09% (81)	0.53	1.54% (58)	1.35% (99)	0.52	2.79% (101)	1.30% (719)	0.00
Board size	11.89 (122)	11.85 (81)	0.92	11.85 (58)	11.73 (101)	0.85	11.44 (102)	13.47 (721)	0.00
Percentage of outside directors	60.00% (122)	58.33% (81)	0.13	55.56% (58)	63.64% (101)	0.03	57.73% (102)	58.33% (721)	0.43
Percentage of grey directors	18.18% (122)	18.18% (81)	0.41	20.00% (58)	18.18% (101)	0.24	21.43% (102)	18.18% (721)	0.03
Incumbent also held the Chairman post (%)	68.15% (135)	83.13% (83)	0.01	77.78% (62)	81.82% (110)	0.50	64.15% (107)	92.53% (751)	0.00

Table 4
Firm performance and industry characteristics

Summary statistics for CEO turnover succession decisions from 1984 to the first quarter of 2005. In order to reduce the effect of outliers all values are provided in medians. Accounting variables are obtained from Compustat and are shown for the fiscal year prior to the turnover. Stock returns are collected from CRSP. Total assets are provided in millions of dollars and adjusted for inflation (shown in 2005 dollars). Firm level return on assets (ROA) is defined as earnings before interest, taxes, and depreciation divided by total assets. Industry-adjusted ROA is defined as firm level ROA less its industry median ROA, as classified by its two-digit Standard Industrial Classification (SIC) code. Median industry-adjusted stock returns are defined as prior twelve month buy-and-hold returns, adjusted by median industry returns over the same period. The Herfindahl index is defined as $(\sum assets_i^2)/((\sum(assets_i))^2)$, where $assets_i$ represents firm assets for segment i . The industry homogeneity measure is calculated following the methodology of Parrino (1997). p-values for two-tailed tests of differences in distributions are provided adjacent to the firm and industry characteristics.

Panel A: Firm Performance									
	Marathon Successions			Outside Successions			Relay Successions		
	Forced	Friendly	p-value	Forced	Friendly	p-value	Forced	Friendly	p-value
Return on Assets (ROA)	4.91 (104)	8.52 (74)	0.00	5.77 (44)	8.61 (91)	0.00	7.40 (89)	9.59 (659)	0.02
Median industry-adjusted ROA	0.34 (104)	1.87 (74)	0.04	-0.63 (44)	1.33 (91)	0.00	1.96 (89)	2.76 (653)	0.25
Median industry-adjusted stock returns	-21.58% (129)	-4.69% (80)	0.00	-19.11% (54)	3.87% (104)	0.00	-12.29% (103)	9.33% (734)	0.00

Panel B: Firm and Industry Characteristics									
	Marathon Successions			Outside Successions			Relay Successions		
	Forced	Friendly	p-value	Forced	Friendly	p-value	Forced	Friendly	p-value
Total Assets (in millions of dollars)	\$8,937 (123)	\$5,508 (79)	0.02	\$7,183 (53)	\$5,271 (103)	0.21	\$5,818 (100)	\$6,680 (727)	0.38
Industry homogeneity measure	0.48 (98)	0.54 (73)	0.23	0.82 (41)	0.56 (87)	0.17	0.51 (83)	0.50 (605)	0.68
Herfindahl index	0.23 (130)	0.23 (76)	0.15	0.23 (60)	0.22 (102)	0.33	0.24 (105)	0.22 (695)	0.01

Table 5**Multinomial logistic regressions estimating the likelihood of succession type**

The models are estimated using available data from the sample of 1,247 turnovers for 806 firms that occur from 1984 to 2005. Coefficient estimates are provided in Panel A and marginal effects are provided in Panel B. The age dummy is equal to one when the incumbent is between 64 and 66 at the time of departure and zero otherwise. The surprise turnover dummy is equal to one for turnover events that are directly initiated by an outside source, related to an unexpected internal or external event that causes the firm to initiate the departure within a week of the shock, or related to an instance where the incumbent departs due to poor health, death, or immediate legal actions. The log of sales is the inflation-adjusted natural log of sales for the year prior to the turnover event. The industry homogeneity measure is calculated following the methodology of Parrino (1997). The Herfindahl index is defined as $(\sum assets_i^2)/(\sum (assets_i)^2)$, where $assets_i$ represents firm assets for segment i . Firm prior year industry-adjusted stock returns are defined as the returns for the twelve months prior to the turnover event, adjusted for median industry returns over the same period. The founding family dummy is set equal to one if the incumbent is related to or is the founder of the corporation and zero otherwise. The incumbent was chairman dummy is equal to one if the incumbent held the positions of CEO and Chairman of the Board at the time of departure and zero otherwise. p-values are provided in parentheses.

Panel A: Coefficients

Outcome	Intercept	Age dummy	Surprise turnover dummy	Log of sales	Industry homogeneity measure	Herfindahl index	Industry-adjusted 12 month returns	Founding family dummy	Incumbent tenure	Incumbent was Chairman dummy	Board size	Board ownership	% of outside directors
Model 1: Six outcomes: (1) forced marathon succession, (2) friendly marathon succession, (3) forced outside succession, (4) friendly outside succession, (5) forced relay succession, (6) friendly relay succession													
Forced turnover with marathon succession	-2.6650 (0.120)	-2.3124 (0.000)	1.2049 (0.001)	0.3129 (0.040)	-1.1203 (0.718)	0.5534 (0.325)	-1.6928 (0.000)	0.7189 (0.255)	-0.1084 (0.000)	-1.1051 (0.002)	-0.1480 (0.006)	2.7350 (0.062)	2.5309 (0.008)
Friendly turnover with marathon succession	-1.7546 (0.325)	-1.5588 (0.002)	2.2554 (0.000)	-0.1793 (0.270)	-1.9597 (0.571)	0.8453 (0.155)	-1.2645 (0.011)	1.1409 (0.033)	-0.0177 (0.442)	-0.0359 (0.938)	-0.0073 (0.890)	2.2216 (0.195)	1.5948 (0.121)
Forced turnover with outside succession	-1.8007 (0.434)	-2.5343 (0.017)	1.8025 (0.000)	0.1476 (0.513)	4.2918 (0.334)	0.9941 (0.233)	-2.7783 (0.000)	0.4854 (0.617)	-0.0986 (0.023)	-0.5315 (0.319)	-0.2345 (0.004)	1.8093 (0.434)	-0.0552 (0.968)
Friendly turnover with outside succession	-0.3356 (0.852)	-0.0584 (0.843)	-0.6354 (0.285)	-0.3033 (0.037)	1.4471 (0.637)	0.1171 (0.821)	-0.1279 (0.727)	1.3766 (0.003)	-0.0265 (0.175)	-0.5945 (0.157)	-0.0657 (0.217)	-2.7263 (0.302)	1.5106 (0.096)
Forced turnover with relay succession	-0.5621 (0.746)	-1.6684 (0.001)	1.6801 (0.000)	-0.0865 (0.575)	2.7712 (0.375)	-0.3055 (0.583)	-2.3768 (0.000)	0.8275 (0.158)	-0.0650 (0.010)	-1.2487 (0.000)	-0.0347 (0.462)	3.8891 (0.004)	0.0057 (0.995)
Number of observations: 846 Year dummies: Yes Model Chi Square: 514.04 (p-value = 0.00)													

Panel B: Marginal Effects

Outcome	Age dummy	Surprise turnover dummy	Log of sales	Industry homogeneity measure	Herfindahl index	Industry-adjusted 12 month returns	Founding family dummy	Incumbant tenure	Incumbant was Chairman dummy	Board size	Board ownership	% of outside directors
Model 1: Six outcomes: (1) forced marathon succession, (2) friendly marathon succession, (3) forced outside succession, (4) friendly outside succession, (5) forced relay succession, (6) friendly relay succession												
Forced turnover with marathon succession	-0.0792 (0.000)	0.0338 (0.112)	0.0168 (0.020)	0.0316 (0.820)	-0.0017 (0.932)	-0.0852 (0.001)	0.0308 (0.454)	-0.0051 (0.001)	-0.0647 (0.028)	-0.0069 (0.008)	0.1412 (0.036)	0.1188 (0.008)
Friendly turnover with marathon succession	-0.0364 (0.000)	0.1983 (0.000)	-0.0108 (0.220)	-0.0671 (0.700)	0.0187 (0.487)	-0.0659 (0.012)	0.0819 (0.146)	-0.0006 (0.607)	0.0132 (0.517)	0.0020 (0.455)	0.1055 (0.274)	0.0729 (0.186)
Forced turnover with outside succession	-0.0305 (0.003)	0.0315 (0.093)	0.0032 (0.433)	-0.0048 (0.949)	0.0276 (0.050)	-0.0345 (0.027)	-0.0051 (0.693)	-0.0012 (0.114)	-0.0087 (0.469)	-0.0030 (0.061)	0.0175 (0.667)	-0.0164 (0.480)
Friendly turnover with outside succession	0.0178 (0.428)	-0.0591 (0.006)	-0.0221 (0.035)	0.1662 (0.410)	0.0002 (0.996)	0.0259 (0.336)	0.1152 (0.067)	-0.0010 (0.507)	-0.0373 (0.328)	-0.0054 (0.156)	-0.2313 (0.214)	0.0990 (0.132)
Forced turnover with relay succession	-0.0698 (0.000)	0.0951 (0.006)	-0.0011 (0.897)	0.1310 (0.430)	0.0004 (0.989)	-0.1283 (0.000)	0.0268 (0.519)	-0.0027 (0.062)	-0.0866 (0.013)	-0.0019 (0.462)	0.2016 (0.009)	-0.0138 (0.787)
Number of observations: 824												
Year dummies: No												

Table 6**Industry characteristics and succession frequency**

Firms are separated by succession type and industry characteristics, as measured by two digit standard industrial classification (SIC) codes. This table is sorted by the frequency of marathon successions within a given industry. The % of sample columns represents the proportion of industry observations as a percentage of the entire sample of successions. For example, firms operating in Electric, gas, and sanitary services (SIC code 49) represent 9.22% of the entire sample of marathon successions, where they represent 10.40% and 9.45% of the entire samples of outside and relay successions. The % forced columns represents the proportion of forced turnovers within a given industry and succession. For example, 60% of marathon succession turnovers that occur for firms within the electric, gas, and sanitary services (SIC code 49) industry are the result of forced turnovers.

SIC Industry	Marathon Successions		Outside Successions		Relay Successions	
	% of sample	% forced	% of sample	% forced	% of sample	% forced
49 Electric, gas & sanitary services	9.22%	60.00%	10.40%	22.22%	9.45%	7.41%
67 Holding & other investment offices	9.22%	80.00%	9.25%	25.00%	10.62%	6.59%
35 Industrial & commercial machinery, computers	5.53%	58.33%	5.78%	30.00%	5.83%	16.00%
63 Life insurance	5.53%	66.67%	4.62%	62.50%	2.92%	16.00%
36 Electronic & electrical equipment	5.07%	54.55%	3.47%	33.33%	4.32%	8.11%
60 Depository institutions	5.07%	72.73%	8.09%	64.29%	3.73%	9.38%
73 Business services	5.07%	54.55%	4.05%	42.86%	2.68%	17.39%
28 Chemicals & allied products	4.61%	50.00%	4.05%	14.29%	8.52%	10.96%
48 Communications	4.61%	80.00%	2.31%	75.00%	2.57%	27.27%
20 Food & related products	4.15%	44.44%	5.20%	55.56%	4.43%	13.16%
53 General merchandise stores	4.15%	66.67%	4.62%	50.00%	2.92%	20.00%
37 Transport equipment	3.23%	42.86%	1.73%	33.33%	5.02%	11.63%
38 Measurement, analysis & control instruments	2.76%	66.67%	2.89%	0.00%	2.45%	9.52%
45 Air transport	2.76%	83.33%	3.47%	100.00%	2.10%	16.67%
59 Misc. retail	2.76%	66.67%	1.16%	0.00%	0.70%	0.00%
61 Nondepository credit institutions	2.30%	100.00%	2.89%	40.00%	0.93%	50.00%
33 Primary metal products	1.84%	75.00%	2.31%	50.00%	2.80%	16.67%
51 Wholesale trade-nondurable goods	1.84%	100.00%	1.16%	0.00%	1.52%	15.38%
13 Oil & gas extraction	1.38%	66.67%	2.89%	40.00%	1.75%	26.67%
16 Heavy construction-non building	1.38%	33.33%	0.58%	100.00%	0.23%	0.00%
26 Paper & allied products	1.38%	33.33%	1.16%	0.00%	3.03%	3.85%
27 Printing, publishing & allied	1.38%	33.33%	1.16%	0.00%	1.98%	11.76%
32 Stone, clay, glass & concrete products	1.38%	66.67%	0.58%	0.00%	1.87%	18.75%
34 Fabricated metal products	1.38%	66.67%	0.00%	-	1.98%	11.76%
54 Food stores	1.38%	0.00%	1.16%	0.00%	0.70%	16.67%
72 Personal services	1.38%	33.33%	0.00%	-	0.23%	0.00%
80 Health services	1.38%	66.67%	0.58%	100.00%	0.70%	16.67%
24 Lumber & wood products	0.92%	50.00%	0.00%	-	0.23%	0.00%
50 Wholesale trade-durable goods	0.92%	100.00%	1.16%	0.00%	0.82%	0.00%
70 Hotels	0.92%	0.00%	1.16%	0.00%	0.35%	100.00%
14 Mining, quarry & nonmetal minerals	0.46%	0.00%	0.00%	-	0.23%	0.00%
15 Building construction-general	0.46%	100.00%	0.58%	0.00%	0.35%	0.00%
23 Apparel	0.46%	0.00%	0.58%	0.00%	0.23%	0.00%
29 Petroleum-refining & related	0.46%	100.00%	1.16%	50.00%	2.57%	0.00%
39 Misc. manufacturing	0.46%	0.00%	0.00%	-	0.00%	-
42 Motor freight transport & warehousing	0.46%	100.00%	0.00%	-	0.35%	0.00%
55 Auto dealers & gas stations	0.46%	0.00%	0.00%	-	0.23%	0.00%
56 Apparel & accessory stores	0.46%	0.00%	0.00%	-	0.23%	50.00%
58 Eating & drinking places	0.46%	0.00%	1.16%	0.00%	1.17%	20.00%
62 Security & commodity brokers	0.46%	100.00%	0.00%	-	1.52%	23.08%
75 Auto repair, services & parking	0.46%	100.00%	1.16%	0.00%	0.00%	-
78 Motion pictures	0.46%	100.00%	0.00%	-	0.23%	50.00%
10 Metal mining	0.00%	-	1.16%	50.00%	0.23%	0.00%
21 Tobacco products	0.00%	-	0.00%	-	0.70%	16.67%
25 Furniture & fixtures	0.00%	-	0.58%	0.00%	0.35%	0.00%
30 Rubber & misc. plastic products	0.00%	-	1.73%	33.33%	1.17%	10.00%
31 Leather & leather products	0.00%	-	0.00%	-	0.23%	0.00%
40 Railroad transport	0.00%	-	0.00%	-	0.93%	0.00%
47 Transport services	0.00%	-	1.16%	0.00%	0.00%	-
52 Building material, hardware & gardening stores	0.00%	-	0.58%	0.00%	0.12%	0.00%
57 Home furniture & equipment stores	0.00%	-	0.00%	-	0.23%	0.00%
64 Insurance agents, brokers & service	0.00%	-	0.00%	-	0.70%	16.67%
65 Real Estate	0.00%	-	0.00%	-	0.23%	100.00%
79 Amusements & recreation	0.00%	-	0.00%	-	0.23%	0.00%
82 Educational services	0.00%	-	0.00%	-	0.12%	0.00%
87 Engineering, research & related	0.00%	-	1.73%	33.33%	0.23%	0.00%
89 Services, not elsewhere classified	0.00%	-	0.00%	-	0.12%	0.00%

Table 7**Stock returns and volatility levels surrounding initial turnover announcements**

Pre- and post-turnover standard deviation of market returns and post-turnover buy-and-hold returns are calculated using available data from the sample of 1,247 turnovers for 806 firms that occur from 1984 to 2005. Volatility levels are calculated as the annualized standard deviation of daily returns over each event period. Market-adjusted volatility is defined as the annualized standard deviation of CRSP value-weighted index-adjusted daily returns over each event period. Market-adjusted returns are calculated as the buy-and-hold CRSP value-weighted adjusted daily returns over the event period. The pre-turnover period for volatility represents the 120 trading day period leading up to three days before the initial turnover announcement. The post-turnover period for volatility and returns represents the 120 trading day period beginning three days after the initial turnover announcement for relay and outside succession firms and the period from three days after the initial turnover announcement up to three days before the final succession decision announcement for marathon succession firms. p-values are provided for two-tailed tests of differences in proportions between the pre- and post-turnover volatility levels.

Panel A: Pre- and Post-turnover Standard Deviation of Market Returns

	Pre-Turnover Volatility	Post-Turnover Volatility	p-value
Marathon Successions			
Forced Turnover	44.02%	46.32%	0.75
Market-Adjusted	41.62%	45.40%	0.72
Friendly Turnover	32.23%	32.16%	0.99
Market-Adjusted	29.99%	29.25%	0.92
Outside Successions			
Forced Turnover	49.38%	49.93%	0.57
Market-Adjusted	45.07%	48.68%	0.55
Friendly Turnover	31.56%	31.28%	0.46
Market-Adjusted	29.36%	30.60%	0.43
Relay Successions			
Forced Turnover	41.61%	40.09%	0.63
Market-Adjusted	38.60%	38.21%	0.25
Friendly Turnover	27.10%	27.03%	0.46
Market-Adjusted	24.79%	24.25%	0.43

Panel B: Post-turnover Buy-and-Hold Returns

	Marathon	Outside	Relay
Forced turnover market adjusted returns	-4.26%	-11.52%	-3.65%
Friendly turnover market adjusted returns	-0.24%	-0.19%	-0.76%

Table 8
Ordinary least squares and Tobit regressions explaining changes in CAPEX and R&D surrounding turnover announcements

The models are estimated using available data from the sample of 1,247 turnovers for 806 firms that occur from 1984 to 2005. Dependent variables are changes in research and development (R&D) and capital expenditures (CAPEX) surrounding the year of the initial turnover announcement, scaled by total assets. An ordinary least squares approach is used for the change in CAPEX and a Tobit model is used for the change in R&D. Independent variables include dummy variables for the initial turnover announcement decisions and controls for firm size (log of sales), diversification (Herfindahl index), and industry structure (homogeneity measure). Additional independent variables include industry-adjusted market returns and changes in ROA for the two years surrounding the turnover announcement, cash scaled by total assets, leverage, and firm market to book ratios. p-values are provided in parentheses below the parameter estimates.

Independent Variables	Dependent Variable (Tobit)		Dependent Variable (OLS)	
	Change in R&D (Unadjusted)	Change in R&D (Industry Adjusted)	Change in CAPEX (Unadjusted)	Change in CAPEX (Industry Adjusted)
Intercept	1.6631 (0.278)	0.2978 (0.856)	-1.5504 (0.236)	-2.0607 (0.117)
Forced marathon succession	-0.1272 (0.801)	0.0707 (0.891)	-0.1805 (0.659)	-0.2104 (0.609)
Friendly marathon succession	-0.1494 (0.778)	-0.1883 (0.742)	-0.2441 (0.577)	-0.2857 (0.516)
Forced outside succession	1.7720 (0.007)	1.6853 (0.019)	-1.2645 (0.035)	-1.0756 (0.074)
Friendly outside succession	0.5661 (0.220)	0.5187 (0.300)	-0.2003 (0.634)	-0.0432 (0.919)
Forced relay succession	0.1359 (0.779)	0.4944 (0.326)	-1.0218 (0.014)	-0.9850 (0.018)
Industry-adjusted 12 month returns	0.1255 (0.465)	0.0320 (0.862)	0.8337 (0.000)	0.8659 (0.000)
Industry-adjusted change in ROA	-0.0281 (0.193)	-0.0290 (0.199)	-0.0036 (0.856)	-0.0153 (0.440)
Log of sales	-0.1232 (0.348)	-0.0852 (0.543)	0.2204 (0.053)	0.2269 (0.147)
Industry homogeneity measure	-9.5603 (0.001)	-9.7647 (0.003)	-0.8256 (0.745)	-1.3869 (0.586)
Herfindahl index	-1.2184 (0.017)	-0.9829 (0.073)	-0.0508 (0.967)	-0.0081 (0.985)
Cash	2.0363 (0.139)	3.3505 (0.020)	0.1085 (0.929)	-0.0637 (0.958)
Leverage	-2.1529 (0.014)	-2.4458 (0.012)	-0.8489 (0.203)	-0.7178 (0.284)
Market to book ratio	0.2642 (0.011)	0.2158 (0.046)	-0.0489 (0.627)	-0.0159 (0.875)
Year dummies	Yes	Yes	Yes	Yes
Number of observations	795	795	779	779
Adj. R^2	0.0695	0.0767	0.0640	0.0446

Table 9**Cumulative abnormal returns surrounding turnover and succession announcements**

Announcement period cumulative abnormal returns (CARs) for each succession decision controlling for turnover type. Market model returns are calculated using the CRSP Value Weighted Index from days -210 to -60 prior to each announcement date. Abnormal returns are calculated over the three day period ($t = -1, 0, +1$) surrounding the event. To be included in the sample, observations are verified to have “clean” event windows, where no other material announcements are made during the four days surrounding the event date. Panel A examines all initial turnover announcement abnormal returns, separated by turnover and succession type. Panels B and C separate the sample of initial turnover announcements into surprise and routine turnovers, where the surprise classification is defined as a turnover event that is directly initiated by an outside source, related to an unexpected internal or external event that causes the firm to initiate the departure within a week of the shock, or related to an instance where the incumbent departs due to poor health, death, or immediate legal actions. Panel D examines final succession announcements for marathon firms exclusively. Note that the number of observations used to calculate abnormal returns differ in cases of marathon turnover and marathon final succession announcements. This is due to the fact that some marathons only have “clean” observations for one of the two announcement dates. t-statistics are provided in parentheses and the number of observations are provided below the t-statistics.

Panel A: All Initial Turnover Announcement Abnormal Returns				
Turnover Type	Method of Succession			
	Total	Relay	Marathon	Outside
Forced	2.50%	0.14%	3.38%	4.94%
	(3.79)	(0.18)	(3.12)	(2.83)
	182	68	80	34
Friendly	0.25%	0.36%	-1.88%	1.01%
	(1.31)	(2.17)	(-2.10)	(1.04)
	705	561	59	85

Panel B: "Routine" Initial Turnover Announcement Abnormal Returns				
Turnover Type	Method of Succession			
	Total	Relay	Marathon	Outside
Forced	3.42%	1.37%	3.72%	6.76%
	(4.63)	(1.70)	(3.04)	(3.32)
	120	45	52	23
Friendly	0.35%	0.30%	-0.73%	1.00%
	(1.76)	(1.87)	(-0.47)	(0.95)
	623	521	25	77

Panel C: "Surprise" Initial Turnover Announcement Abnormal Returns				
Turnover Type	Method of Succession			
	Total	Relay	Marathon	Outside
Forced	0.73%	-2.34%	2.74%	2.07%
	(0.57)	(-1.63)	(1.29)	(0.56)
	62	23	28	11
Friendly	-0.49%	1.12%	-2.73%	1.02%
	(-0.67)	(1.06)	(-2.58)	(0.56)
	82	40	34	8

Panel D: Marathon Succession Resolution Abnormal Returns			
Turnover Type	Final Succession Decision		
	Total	Inside	Outside
Forced	3.44%	0.23%	4.43%
	(4.46)	(0.36)	(4.61)
	97	23	74
Friendly	2.21%	0.34%	3.30%
	(2.14)	(0.49)	(2.11)
	71	26	45

Table 10**Ordinary least squares regressions explaining cumulative abnormal returns surrounding turnover and succession announcements**

The models are estimated using available data from the sample of 1,247 turnovers for 806 firms that occur from 1984 to 2005. Dependent variables in Models 1 and 2 (Models 3 and 4) are the three day market model cumulative abnormal returns (CAR) surrounding initial turnover announcements (final marathon succession decisions). To be included in the sample, CAR observations are verified to have “clean” event windows, where no other material announcements are made during the four days surrounding the event date. Independent variables include dummy variables for the initial turnover announcement decisions for models 1 and 2 and the succession resolution decisions for marathon successions in models 3 and 4. Additional independent variables include controls for unexpected turnovers, (surprise turnover dummy), firm size (log of sales), diversification (Herfindahl index), industry structure (homogeneity measure), and firm performance (Industry-adjusted 12 month returns and industry-adjusted ROA). p-values are provided in parentheses below the parameter estimates.

	Initial Turnover Announcement		Marathon Succession Resolution	
	Model 1	Model 2	Model 3	Model 4
Intercept	0.0082 (0.002)	0.0009 (0.964)	-0.0092 (0.614)	-0.1572 (0.047)
Forced marathon succession	0.0171 (0.017)	0.0180 (0.023)	-	-
Friendly marathon succession	-0.0176 (0.026)	-0.0176 (0.038)	-	-
Forced outside succession	0.0348 (0.001)	0.0431 (0.000)	-	-
Friendly outside succession	0.0026 (0.683)	0.0037 (0.623)	-	-
Forced relay succession	-0.0066 (0.366)	-0.0054 (0.503)	-	-
Outsider chosen after a friendly marathon succession	-	-	0.0471 (0.037)	0.0545 (0.033)
Insider chosen after a friendly marathon succession	-	-	0.0165 (0.507)	0.0221 (0.424)
Outsider chosen after a forced marathon succession	-	-	0.0491 (0.021)	0.0424 (0.082)
Surprise turnover dummy	-0.0078 (0.158)	-0.0139 (0.026)	-	-
Industry-adjusted 12 month returns	-0.0241 (0.000)	-0.0240 (0.000)	-0.0436 (0.004)	-0.0346 (0.037)
Industry-adjusted ROA	-0.0002 (0.378)	-0.0002 (0.312)	-0.0009 (0.212)	-0.0006 (0.466)
Log of sales	-	0.0008 (0.701)	-	0.0113 (0.098)
Industry homogeneity measure	-	0.0157 (0.709)	-	0.1209 (0.437)
Herfindahl index	-	-0.0039 (0.566)	-	0.0300 (0.196)
Number of observations	748	615	139	122
Adj. R^2	0.0623	0.0749	0.0752	0.0717
F-statistic	7.21 (0.000)	5.52 (0.000)	3.19 (0.009)	2.26 (0.028)

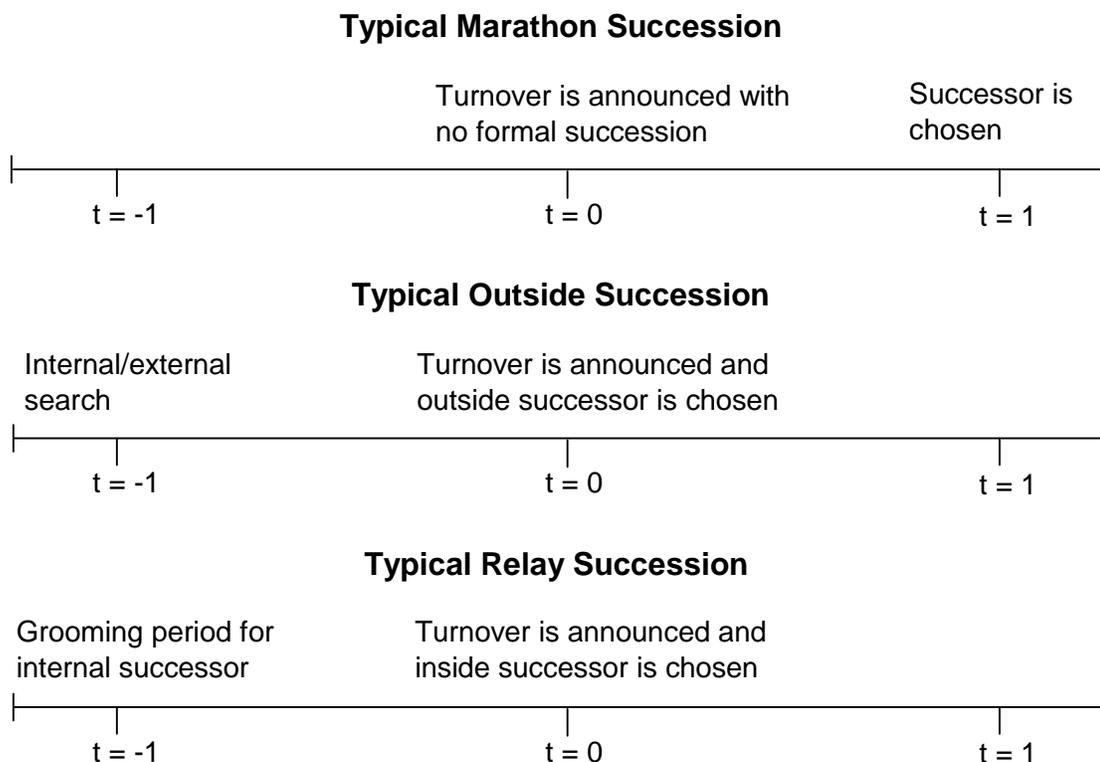


Figure 1
Succession process outline

The above time lines illustrate the three main succession processes examined. Time $t = -1$ represents the period just prior to the formal turnover announcement. This period can range from months (in the case of some outside succession processes) to years (in the case of many relay succession processes). For relay and outside succession processes, time $t = 0$ represents both the formal turnover and succession announcements of the firm. In cases of marathon succession processes, time $t = 0$ represents the turnover announcement and $t = 1$ represents the final succession announcement. The average time between marathon turnover and succession announcements average over six months for both forced and friendly turnovers.