Investigating CEO Succession after Sudden Death

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Abstract
This paper attempts to examine the relationship between stock market reaction to CEO death and whether they are succeeded by an existing employee at the firm or an external hire. We use data from 81 CEO deaths and the stock prices around the date of death to conduct an event study analysis. We find a significant positive stock price reaction to CEO deaths. We predict that positive stock price reactions increase the likelihood of internal succession. We do not find a significant relationship between stock price reaction and the nature of CEO succession. However, we provide suggestive evidence and argue for our hypothesis using prior literature, and an anecdote from our data.

Keywords: Executive promotion, Event study, Stock market reaction

JEL Codes: M12, M51

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1. Introduction:

CEOs are often the most important employees in a company. In fact, a CEO's performance is often seen as an indicator of the company's success (Finkelstein et al., 2009; Kesner and Sebora, 1994). Consequently, CEO succession is a pivotal process in determining the future performance of a

2. Literature Review:

Internal/External CEO Succession

Research has consistently demonstrated the profound influence of CEOs on organizational outcomes. Finkelstein and Hambrick (2009) argue that CEOs shape corporate strategies, culture, and ultimately, financial performance. Empirical studies by Hambrick and Quigley (2014) reinforce this by highlighting the correlation between CEO characteristics and company success, emphasizing the significance of a well-aligned CEO for sustained growth and profitability. Besides the actual effects of CEOs on a company's performance, Finkelstein et al. (2009) argue that CEO performance is perceived as an indicator of company success outside of its actual effects on a company's performance. These papers highlight the significance of a CEO on a company's workings. Essentially, a good CEO can be conducive to growth and success within a company while a bad CEO can be quite detrimental.

CEO hiring is a very difficult task for companies. However, the decision between external recruitment and internal promotion for CEO positions carries its own set of implications. Past research has shown that there are advantages to both internal promotion and external recruitment. However, Kauhanen et al. (2012) and Tsoulouhas et al. (2007) find that external recruitment tends to be far less common for higher positions within firms. In their data from firms in Finland, they see that internal hires account for 19% of the hires at the fifth job level, but account for 48% of all hires at the top of the hierarchy. Lazear

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company is open about favoring external hires, workers lose the incentive of promotion and may be discouraged from working hard at their job. Furthermore, this may also lead to lower attachment from workers to their current companies. Since the prospect of promotion is lower, employees may

There is no consensus on stock price reactions to CEO deaths in the current literature. Hayes and Schaefer (1999) find a positive reaction to CEO deaths, while Worell et al. (1986)

The CEO turnover data set only classifies death as the reason for CEO dismissal when the death is unforeseen. Consequently, these turnovers do not include CEOs retiring due to terminal illnesses. This allows us to treat the CEO deaths in this data as sudden deaths. After restricting the turnovers to those whose reason is CEO death, we are left with 81 observations.

Figure1 - CEO Deaths by Day of Week

Figure 1 shows a breakdown of CEO deaths by the day of the week. The observations are mostly uniformly distributed, but deaths seem to be less common in the middle of the week. However, this may be due to our small sample size.

To find data on internal/external succession, we scraped the internet for articles and announcements about new CEO appointments. Out of the 81 turnovers in our data set, we find that 8 of them were succeeded by people from outside the organization while the rest were internal

promotions. The discrepancy between the number of internal and external successions in our dataset affects the statistical power of any statistical analysis which separates the two groups.

The CAP-IQ data includes stock price information for each of the companies whose CEO died around the day of death. It also includes the average stock price for the S&P 1500 index from 1995-2024. Using the stock prices for the companies and the S&P 1500 index, we calculate stock price returns by finding the percentage change in stock prices from day-to-day.

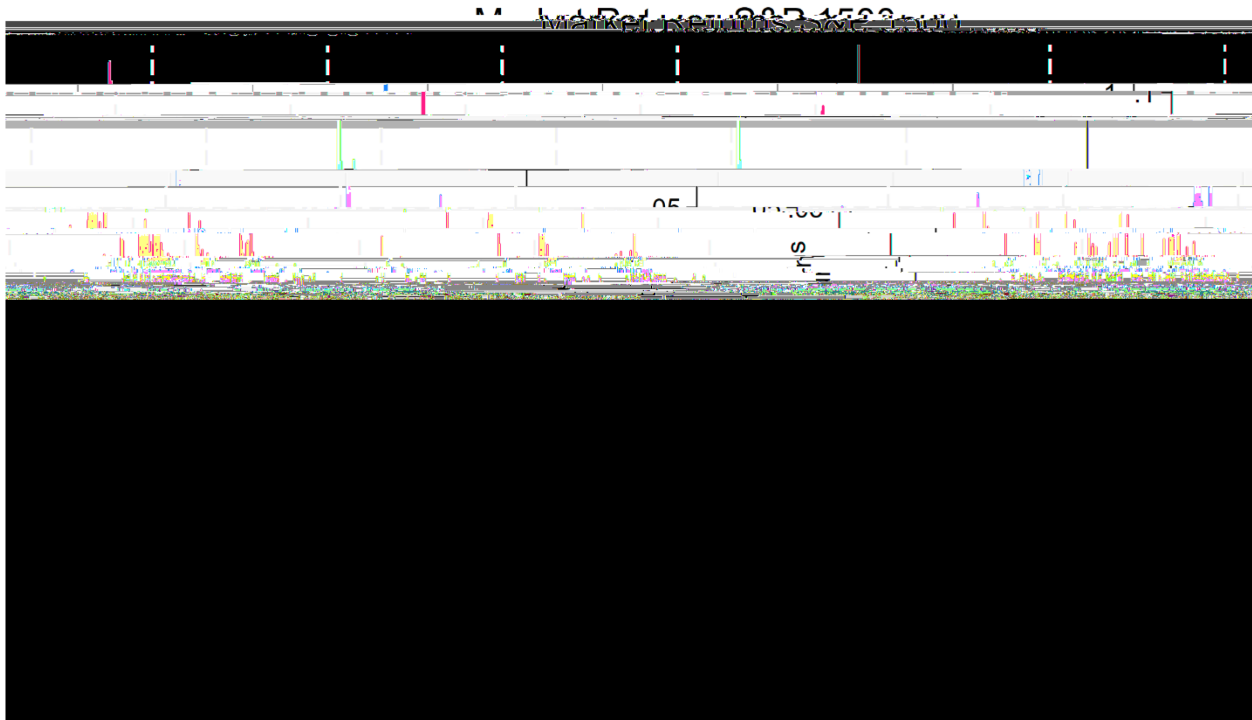

Figure 2 - Market Returns for S&P 1500 Firms

Figure 2 shows the calculated market returns for S&P 1500 firms. As can be seen, there are notable spikes in 2008 and 2020. These coincide with the 2008 recession and the onset of the COVID-19 pandemic respectively. Other than that, there are no considerable spikes in market returns during the time period of our analysis.

Table 4- Summary Statistics for CompanyStock Data				
Variable	Observations	Mean	Std. dev.	Min

Subsequently, to study the effects of stock price response on CEO succession, we estimate the following standard Probit model

$$P(Internal_i = 1 \mid CAR_i) = \Phi(\beta_0 + \beta_1 CAR_i)$$

Here, $Internal_i$ is a binary variable indicating whether a CEO death resulted in internal succession, CAR_i is the estimated cumulative abnormal return for each CEO death from our event study analysis, and Φ is the cumulative distribution function for the standard normal distribution.

5. Results/Discussion

Stock Price Reactions to CEO Death

Table 2 shows the results from our event study. Panel A shows the daily abnormal returns from 5 days before the event till 5 days after. Since our event study looks at multiple events, we report Patell p-values and adjusted Patell p-values, originally used in Patell (1978). We find that the daily abnormal returns one day after CEO death is positive and significant at a 95% confidence level.

Panel B reports the cumulative abnormal returns across different event windows. We find that the cumulative abnormal returns in the windows (-1, 2) and (-1, 5) are both positive. The CAR for (-1, 2) is significant at a 90% confidence level, while the CAR for (-1, 5) is significant at a 99% confidence level.

t	AR	Patell p-value	Adjusted Patell p-value

until a few days after the death of the CEO. Figure 3 shows the cumulative abnormal returns in the window (-5 ,5). We observe a sharp jump relative to other time periods right after the event. However, we do not see any major, or significant, changes in the days following the first day after the death.

Our findings are not surprising based on the literature. Hayes and Schaefer (1995) similarly find a small, positive, yet significant stock price reaction to CEO death. Furthermore, the fact that the reaction is immediate suggests that the stock market acts frictionlessly and with a high degree of information.

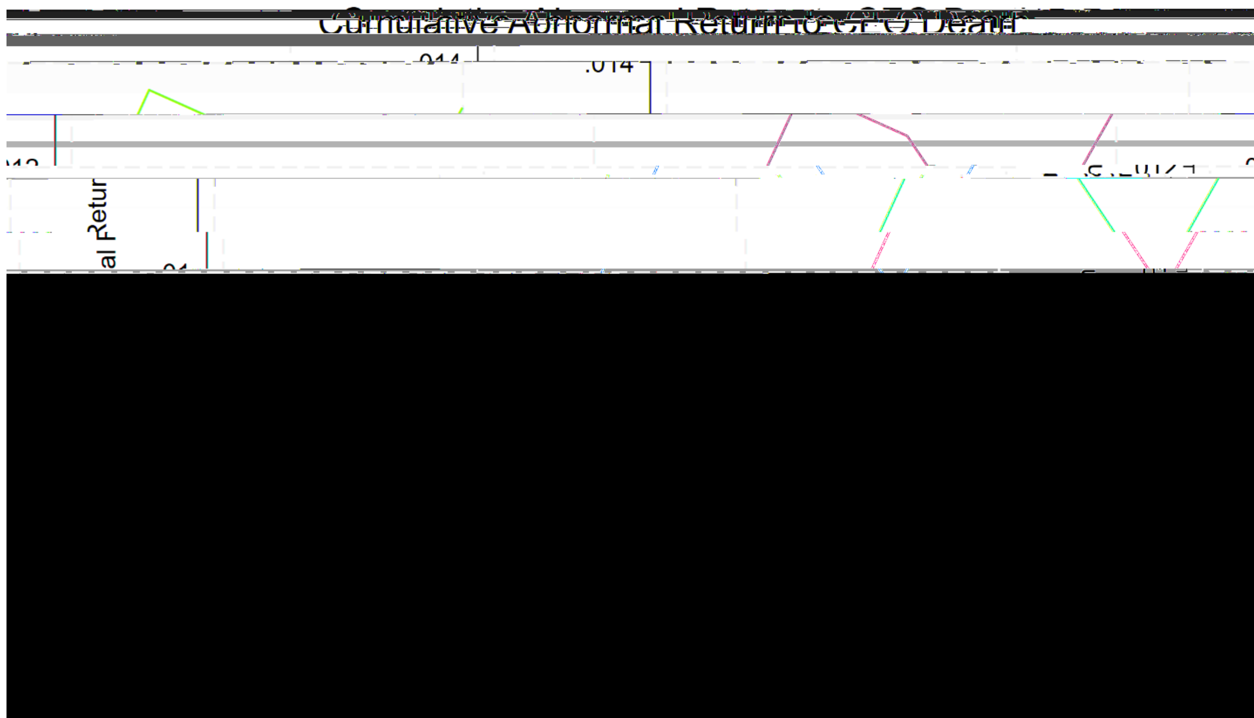

Figure3 - µuµo ŸÀ v}Œu o Z šµŒv• š} K šZ

Falsification Test

We perform a falsification test for our abnormal return analysis to address concerns about the selective nature of our sample. To do so, we randomly select a 3-day period between our estimation window and previous event window to be our new event window. We do not consider any window after our event window to avoid capturing any long-term effects of CEO death.

6. Conclusion:

We find a positive, immediate stock price reaction to CEO deaths. Our findings are highly statistically significant and even pass a falsification test. These results are consistent with the literature on the topic which has found positive links between stock price reactions and CEO death. The results also provide evidence that the stock market has a very high degree of information transfer between firms and shareholders, and that the stock market operates with very few frictions because the reaction to CEO death is immediate and then disappears after the first time period.

While we are unable to make conclusions about the effect of stock price response on whether a CEO is succeeded internally or externally, we hypothesize that positive stock price responses to CEO death increase the likelihood of internal succession. We argue for this idea and provide a way to test our hypothesis using a real-life example and prior research on the subject.

Firstly, when we remove the external successions from the data, we observe a clear and significant spike in cumulative abnormal returns. Figure 4 clearly highlights this spike. While this itself does

not establish anything about the causal relationship between internal succession and positive stock price reaction, it is what we would expect to observe if there were a causal relationship.

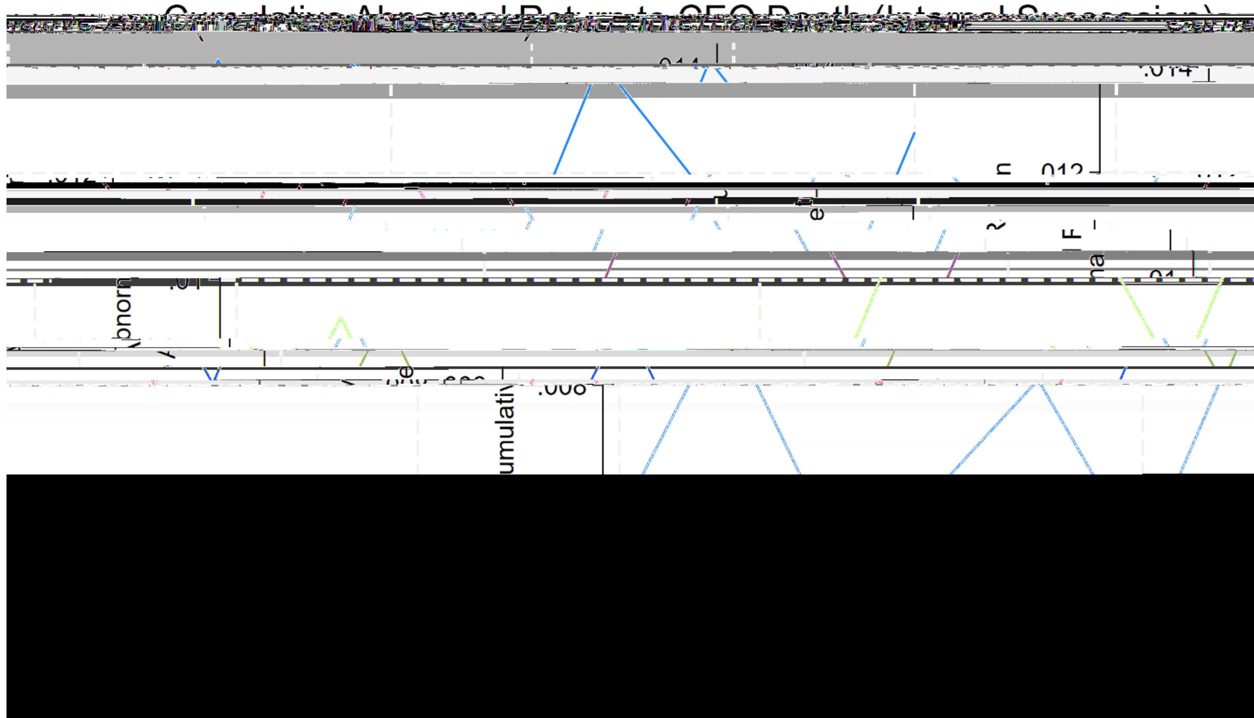

Figure4 - μuμo ŸÀ v}Œu o Z šμŒv š} K šZ ~/vš Œv o ^μ ••]}v•

The best way to explain why positive stock price reaction would result in internal succession is through managerial entrenchment. If a CEO overstays in their position, shareholders will identify successors out of discontentment with the current CEO's performance. Meanwhile, other executives within the firm will be incentivized to portray themselves as worthy successors because they know that they might be better suited for that job. As a result, the heir apparent is likely to be from within the firm. Shareholders would have more information about executives within the firm and will be in a better position to gauge their abilities. On the other hand, looking externally for a CEO would be attached with a far greater deal of uncertainty. Shareholders would know little about how someone at another company would fare at the current one, especially compared to employees

independent director and was appointed President and CEO in 2021. It is quite plausible that his success at Thomson Reuters made him an excellent candidate to be successor to Mr. Robinson. The stock market definitely thought so as the abnormal returns to the death of Mr. Robinson was almost 8%.

The idea of entrenchment is not limited to CEOs or executives in corporations. Rather, it is indicative of the broader nature of leadership roles. Take for instance the current Presidential race between Joe Biden and Donald Trump. Many surveys have shown that the average American voter feels that both presidential candidates are too old to run for office. However, the power that each of them wield over their parties ensures that they remain the face of their parties even though they may not be the ones best suited for that role. This leaves American voters feeling hopeless as they have to make do with candidates who, in their opinion, are not the most efficient choice for President. Countless other examples can be found of leadership entrenchment leading to inefficiencies, from more older athletes retaining their spots on a team regardless of their performance, to US Supreme Court judges having lifelong tenure regardless of their declining judgment with age.

The implications of what our study hoped to find are far-reaching because it potentially reveals a lot about the nature of leadership entrenchment. The potential for further studies on the topic is great and with access to the right data (which is available on EXECUCOMP), we could gain answers to the unsolved questions of this paper quite soon. On a somewhat morbid note, our predictions suggest that if one is faced with a situation with leadership entrenchment, an exogenous shock that removes the leader (death, serious illness, etc.) is the best case scenall,

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Hayes, R. M., & Schaefer, S. (1999). How much are differences in managerial ability worth?. Journal of Accounting and Econo1-JWth4 (di)-2.I-2 (i)-2 (t, D)-11 (E)1 (L)2 S ED (g)10 (avTj 14.dn,)2