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Abstract

This study finds a positive, economically meaningful impact of generalist chief executive officers (CEOs) on shareholder value using 164 sudden deaths and 345 non-sudden exogenous turnovers. The higher a departing CEO's general ability index (GAI), independently and relative to her successor, the lower is the abnormal stock return to turnover announcements. Returns reflect post-turnover changes in operating performance. Further, CEOs' and successors' GAIs are significantly positively related, but only for non-sudden turnovers. Consistently, for sudden deaths we find positive stock returns to appointments of generalist successors. The results provide a market-based explanation for the generalist pay premium.

I. Introduction

In light of chief executive officers' (CEOs') impact on firm performance (see, e.g., Bertrand and Schoar (2003), Bennedsen, Pérez-González, and Wolfenzon (2017)), the question of which skills enable them to successfully manage firms and how these skills relate to CEO pay has drawn particular attention (see, e.g., Graham, Li, and Qiu (2012), Falato, Li, and Milbourn (2015)). In this regard, the literature has shown that generalists, who possess broad managerial work experience, account for a growing share of top management and receive significant hiring and pay premia, consistent with a high demand for general managerial skills (see, e.g., Murphy and Zabojnik (2004), Custódio, Ferreira, and Matos (2013), and Frydman (2015)). While this evidence suggests that generalists benefit modern corporations, the question whether executives' general managerial skills have a positive impact on shareholder value has not been addressed systematically.

Our study addresses this question empirically based on 509 exogenous executive turnovers (i.e., 164 sudden deaths and 345 non-sudden turnovers unrelated to firm conditions). We examine the stock price reaction to announcements of these turnovers, which reflects an executive's future contribution to shareholder value net of her expected replacement. The use of exogenous turnovers, particularly sudden deaths that occur randomly, addresses the endogenous executive-firm matching, which typically distorts inferences about the value of executives. However, as this approach cannot generally address the nonrandom replacement of departing executives, we also examine the choice of successors, stock returns to their appointments, and post-turnover changes in operating performance to accurately assess the value of generalists.

With regard to the matching between generalists and firms and their supply in the labor market, we assume a competitive assignment model, similar to Gabaix and Landier (2008) and Terviö (2008), in which firms compete for scarce managerial talent (i.e., generalists) in order to

maximize firm value net of compensation costs. This assumption is consistent with the generalist pay premium and the growing competition for generalists and managerial talent in general (see, e.g., Frydman (2015)). We further assume that frictions distort the optimal matching between executives and firms. Such frictions include agency and search costs, executives' preferences to work for smaller companies due to early work life experience (see, e.g., Schoar and Zuo (2017)), and the bias towards a matching between geographically proximate executives and firms (Yonker (2017)). Our assumptions are in line with the theoretical framework in Jenter, Matveyev, and Roth (2016) who find significantly negative (and positive) stock returns in reaction to CEO deaths, which indicate that managerial talent is in short net supply and that the executive-firm matching is not per se frictionless.[1] Hence, if generalists have a positive effect on shareholder value, we expect announcements of exogenous generalist turnovers to cause declines in firms' stock prices that reflect the loss of costly-to-replace managerial talent.

According to extant literature (see, e.g., Murphy and Zabojnik (2004), Murphy and Zabojnik (2007), Bertrand (2009), Ferreira and Sah (2012), and Frydman (2015)), the value of generalists for modern corporations and their shareholders stems from the increased scale, scope and complexity of firms, severe technological progress, growing competition, and improvements in business education that have increased the value of general business skills. For example, generalists can be expected to deal more successfully with high competition and technological

[1] We also provide empirical support for our assumptions. First, we find that the more general managerial skills a departing executive had, the less likely are firms to compensate the loss in general human capital, consistent with generalists being scarce managerial talents. Second, we find that while generalist CEOs are more likely to match to larger firms that can afford to pay them a premium, they also manage small companies. In unreported tests, we find that about 20% of the small firms in our sample (i.e, firms with below median firm size) are managed by executives with high general managerial skills (i.e., a general ability index in the top quartile of its distribution). Besides labor market frictions, there are several reasons why valuable generalists match with small firms that find it particularly costly to replace managerial talent. For example, (small) firms may have been founded by generalists or may have competed for specialists ending up with generalists who only later became valuable when firms' industries were subject to shocks that altered the firm's managerial skill needs (see Eisfeldt and Kuhnen (2013)).

progress as they are better able to adapt to industry shocks (Guay, Taylor, and Xiao (2015)) and to foster innovation (Custódio, Ferreira, and Matos (2017)). Furthermore, as firms' organizational structures have flattened considerably (see, e.g., Rajan and Wulf (2006), Guadalupe, Li, and Wulf (2014)), today's executives have to interact with more people inside and outside the firm and have to solve more diverse problems. Consequently, executives with work experience in different firms, industries, and positions (including knowledge of accounting, finance, investor relations, marketing, and sales) can be expected to find it easier to perform these tasks. The incorporation of computers and the internet into everyday business has augmented the need for general managerial skills as it reduced the costs of acquiring knowledge and communication and reinforced the growing scope of control for top executives (see, e.g., Garicano (2000), Rajan and Wulf (2006)). In sum, based on the literature we expect generalists to have a positive impact on shareholder value.[2]

To examine whether this expectation is supported by the data, we use sudden deaths as our primary testing laboratory as they cause random, unexpected executive turnovers. We find that the stock market indeed attributes a significantly higher contribution to shareholder value to CEOs (but not to chairmen or presidents) who possess more general managerial skills. In particular, the higher a CEO's general ability index (GAI), as proposed by Custódio et al. (2013), the more does a firm's stock price decline around the announcement of its CEO's sudden death. A 1-standard-deviation increase in the GAI is associated with an economically meaningful and statistically significant average decrease in abnormal stock returns of 2.3 percentage points. This result is robust to various controls for CEO, firm, and corporate governance characteristics.

[2] Anecdotal evidence supports the view that executives' general managerial skills are valuable to corporations. See, for example, "New Problems, New Approaches: The Rise of the Generalist" (*Forbes.com* on 12/28/2013): "[…] companies are in need of Generalists with new, agile skills that can see the big picture, listen, synthesize ideas and connect the dots. […] They bring expertise and experience in several areas, fueled by insatiable curiosity and the ability to "hyper-learn" new concepts and ideas."

Although the above result remains statistically significant when we use median regressions to account for outliers, concerns of small sample bias stemming from the limited number of sudden CEO deaths might remain. Further, as sudden deaths are unexpected events, which force firms to find successors under pressure of time, our results might be unique to this type of CEO turnover. To address these concerns, we use the larger sample of non-sudden exogenous CEO turnovers and a pooled sample of both sudden and non-sudden turnovers to provide complementary evidence. Specifically, we use exogenous turnovers classified and provided by Eisfeldt and Kuhnen (2013) with available GAI data provided by Custódio et al. (2013). Consistent with the results found for sudden deaths, we document a negative relation between abnormal stock returns to turnover announcements and the departing CEO's GAI.

We perform several robustness tests using all CEO turnover samples. First, we use alternative GAI measures. Specifically, if investors are rational the stock price reaction to CEO departures will incorporate the GAI of the expected and endogenously chosen successor. Therefore, we use the difference between the GAI of the departing CEO and that of her successor (i.e., net GAI). We find that the larger the net GAI (i.e., the more general managerial skills are expected to be lost and remain uncompensated as the incumbent CEO departs), the larger is the reduction in shareholder value upon the CEO departure. We also calculate the general ability index using the unweighted index components and we analyze each GAI component separately. The latter test reveals significantly negative relations between work experience in different firms, industries, and positions and abnormal stock returns to CEO turnovers. Second, we address the concern that the general ability index might capture CEOs' innate talent, elite education or network, which could have positive effects on shareholder value. Following Custódio et al. (2013), we re-estimate our regressions including additional controls such as the selectiveness of the CEO's college, MBA education, or her age of first CEO appointment. Third, we use

alternative event windows and return models to calculate cumulative abnormal returns. We find the positive effect of general managerial skills on shareholder value to be robust to all these tests.

As our instrument of exogenous turnovers cannot directly address the endogenous choice of a CEO's successor, we provide additional evidence based on the incoming CEO. First, we find that the net GAI and the successor's GAI have some explanatory power for changes in operating performance (e.g., profit margin) after turnovers. For example, the more general managerial skills are lost at the top of the firm, the weaker is the post-turnover performance. This finding indicates that the lower announcement returns to turnovers of generalists reflect expected changes in future firm performance. Second, we provide evidence on the supply and demand of generalists. While we find that the supply of generalists has increased over time, consistent with the increasing share of generalists documented in Custódio et al. (2013), the average firm was not able to completely replace lost general human capital until the mid-2000s. In this context, we find that firms subject to non-sudden turnover typically replace high-GAI departing CEOs with high-GAI successors. However, we find no significantly positive relation between the GAIs of departing CEOs and their successors for firms subject to sudden deaths. Thus, we expect investors to be less likely to correctly anticipate and price the general managerial skills of expected successors when CEOs die suddenly. Accordingly, we document positive stock returns to appointments of high-GAI successors after sudden deaths. This result is driven by small firms and those headquartered in rural areas, which are less likely to replace lost general human capital and for which asymmetric information is higher. Given that stock prices reverse, we additionally examine the sum of the abnormal stock returns to CEO turnovers and subsequent successor appointments. We find a negative relation between this overall stock price reaction and the net GAI, particularly for sudden CEO deaths. This result indicates that the more general managerial skills firms lose when CEOs depart, the larger is the reduction in shareholder value. The result is driven by small firms

and those located in rural areas. In all, the analysis of successors provides further evidence that generalists are scarce and that they benefit shareholders.

Our study contributes to the literature in at least two ways. First, we extend the limited number of empirical studies on the role of managerial work experience in corporate finance (see, e.g., Custódio and Metzger (2013), Custódio and Metzger (2014), Benmelech and Frydman (2015), Dittmar and Duchin (2016), and Schoar and Zuo (2017)), especially the literature on general managerial skills. Concerning the latter, our study provides a market-based explanation, consistent with Murphy and Zabojnik (2004), for the generalist hiring and pay premium documented by Custódio et al. (2013) and Frydman (2015). Thereby, we also contribute to the literature on the relation between CEO skills, pay, and firm performance (see, e.g., Chang, Dasgupta, and Hilary (2010), Falato et al. (2015)). Specifically, our main finding that CEOs with more general managerial skills are associated with higher shareholder value provides a rational why firms are able (and willing) to pay a premium to attract and retain generalists when they have to compete for this scarce managerial talent in the executive labor market. In this regard, Custódio et al. (2013) cannot detect a relation between CEOs' general managerial skills and firm performance using multivariate regressions. However, the authors point out that the CEO-firm match and performance are endogenous and that their tests may lack power. For example, given their cost cutting abilities, generalists might likely match to companies with relatively poor performance and, hence, be associated with lower firm value. Endogeneity concerns in research on board structures and firm performance have been highlighted in the literature (see, e.g., Adams, Hermalin, and Weisbach (2010)). Our study relies on exogenous CEO turnover, particularly sudden deaths, and additional analyses of the incoming CEO to address concerns of endogenous CEO-firm matching and succession.

Second, our study contributes to the literature concerned with the impact of CEOs on firm value and performance (see, e.g., Johnson, Magee, Nagarajan, and Newman (1985), Bertrand and Schoar (2003), Adams, Almeida, and Ferreira (2005), Kaplan, Klebanov, and Sorensen (2012), Jenter et al. (2016), and Bennedsen et al. (2017)). In particular, our evidence of a positive effect of generalists on shareholder value and operating performance improves our understanding of the skills that enable CEOs to impact firm value. In this regard, our study suggests that general managerial skills are an explanator of the considerable heterogeneity in abnormal stock returns to sudden CEO deaths documented in the literature (see, e.g., Nguyen and Nielsen (2014), Jenter et al. (2016), and Quigley, Crossland, and Campbell (2017)). We conclude that corporate boards and executive search firms should take the general managerial skills of incumbent CEOs and potential successors into account when they engage in succession planning.

The remainder of this paper is organized as follows: We describe our sample and data in Section II. Section III presents empirical results on the stock market reaction to sudden executive deaths and other arguably exogenous turnovers as well as additional robustness tests. Section IV is concerned with the incoming CEO. Conclusions follow.

II. Data and Variables

A. Sudden Executive Deaths

To compile our sample of sudden and unexpected executive deaths, we use the data from Salas (2010), who identifies suddenly deceased CEOs, presidents, and chairmen of the board, and complement it with data on sudden CEO deaths from Quigley et al. (2017). The sample period in the two aforementioned studies ends in 2008 and 2009, respectively. We then hand-collect data on sudden executive deaths for the years 2009 to 2012 to increase sample size. We follow the existing literature (see, e.g., Johnson et al. (1985), Slovin and Sushka (1993), Salas (2010), and

Nguyen and Nielsen (2014)) to find sudden executive deaths. We search major news sources – in particular Google, LexisNexis, the New York Times, the Wall Street Journal, and the Washington Post – for articles disclosing unexpected deaths of CEOs, presidents, and chairmen. We use keyword search terms such as "chief executive officer," "CEO," "president," "chairman," and "accident," "deceased," "heart attack," "stroke," "sudden(ly)" and "unexpected" to identify unexpected deaths. We exclude cases of deaths if they cannot be identified as sudden or unexpected or if confounding events were announced simultaneously. We also exclude murders, overdoses, and suicides as they might be related to firm performance.[3]

Because we examine the stock price reaction to announcements of executives' sudden deaths, we require stock return data from the Center for Research in Security Prices (CRSP) for all companies in our sample. We also require accounting data for the previous fiscal year from Compustat as well as data on executives' work experience and their age, founder status, and tenure. These data are hand-collected from executive biographies. Our main source of biographical data is the Marquis Who's Who database. Other sources are the Standard & Poor's Capital IQ database and firms' proxy statements (in microfiche format for early years) as well as obituaries and other press releases around sudden deaths.[4] Our final sample consists of 164 sudden death events with available stock price information, accounting data (i.e., market-to-book

[3] For a more detailed description of the sample selection process, we refer the reader to Salas (2010). Our results remain qualitatively similar when we exclude the sudden deaths after 2008, which we have hand-collected ourselves.

[4] When we did not find an executive in the Marquis Who's Who or Capital IQ databases, we collected data on executives' work experience (or other characteristics) using a Web crawler for Google in conjunction with different keywords. We started by using simply the name of the executive along with the company name as well as "DEF 14A" to get the relevant U.S. Securities and Exchange Commission (SEC) filing. If the DEF 14A was not available on page 1 of the Google results, we crawled all results from Google's pages 1 to 10 by using the executive's name along with the company name. Usually, filings were available via SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system. In case no relevant results turned up, we crawled results of the executives together with keywords like "death," "dies" and "died." We browsed each document manually to obtain the relevant data. In several cases, the information was available via obituaries and press releases.

ratios, return on assets, and total assets), and executive characteristics. 101 (or 62%) of the sudden deaths involve CEOs. For robustness purposes, we complement our sample with corporate governance and further accounting data (i.e., capital expenditures, leverage, research and development expense). The former is hand-collected from firms' proxy statements. As this data is not available for all event firms, some analyses presented in our paper are based on fewer observations.

B. Other Exogenous Turnovers

The use of sudden deaths raises two concerns. First, the number of suddenly deceased executives is limited, which might cause small sample bias. Second, as sudden deaths are unexpected events that force firms to find successors under pressure of time, results might be unique to this type of CEO turnover. Hence, we also use a larger sample of arguably exogenous, non-sudden CEO turnovers to present additional empirical evidence.

We use exogenous CEO turnovers between 1992 and 2005 as classified and provided by Eisfeldt and Kuhnen (2013), which we match to the GAI data provided by Custódio et al. (2013) for the years 1993 to 2007.[5] Both data sets are based on ExecuComp, which we use to obtain additional information about CEOs' age, tenure, and titles (chairman, president). We match the above data with Compustat to get firms' accounting information. All data can be matched via gvkeys. Data from Eisfeldt and Kuhnen (2013) do not include turnover announcement dates needed to determine announcement returns. We hand-collect announcement dates from 8-K filings and online news sources, unless they are included in the CEO turnover data provided by Jenter and Kanaan (2015) and Peters and Wagner (2014).[6]

[5] We thank the authors for providing their data on the Web site of the Journal of Financial Economics at http://jfe.rochester.edu/data.htm. We particularly thank Cláudia Custódio for providing us with detailed data on the components of the general ability index.

[6] We thank Dirk Jenter, Florian Peters, and Alexander Wagner for providing their CEO turnover data.

The resulting data set comprises 345 exogenous CEO turnovers between 1993 and 2005 for which we can calculate announcement returns and for which we have information on CEOs' GAIs and necessary accounting data. Because some CEO information is missing for some turnover events, regressions that include additional CEO controls are based on only 310 observations. For the 345 turnover cases, we collect information about the identities of CEOs' successors and the dates on which their appointments were announced. These additional data allow us to calculate abnormal stock returns in reaction to successor appointments and to determine the difference between the GAI of the departing CEO and that of her successor. Yet, regressions that use variables calculated with these data are based on fewer observations as information about the successor's identity or about her GAI is not available for all CEOs.

C. Measuring General Managerial Skills

We measure general managerial skills following Custódio et al. (2013). For our sample of non-sudden exogenous turnovers, we use the GAI data provided by Custódio et al. (2013). For our sample of sudden executive deaths, we construct the GAI following the methodology in Custódio et al. (2013). The GAI comprises work experience in different firms, industries, and positions as well as work experience in the CEO position and with conglomerates. This type of work experience is associated with the acquisition of generic skills, for example via working in different organizational areas (e.g., finance, marketing, and sales) and positions within a firm or in different business environments in different firms and industries. In particular, we calculate the variable GAI based on equation (1):

$$(1) \qquad GAI_i = 0.268\ X1_i + 0.312\ X2_i + 0.309\ X3_i + 0.218\ X4_i + 0.153\ X5_i\ ,$$

where i stands for the departing executive i, X1 is the number of different positions that the executive performed during her career (until the year of her death); X2 is the number of different

firms where the executive worked during her career; X3 is the number of different industries at the 4-digit Standard Industrial Classification (SIC) level where the executive worked during her career; X4 is a dummy variable equal to 1 if the executive held a CEO position at another firm before (0 otherwise); and X5 is a dummy variable equal to 1 if the executive worked for a multi-division conglomerate before (0 otherwise). If an executive cannot be identified as having prior CEO experience but founded another company before, the variable X4 also equals 1. In contrast to Custódio et al. (2013), who rely solely on data from BoardEx, we do not restrict the GAI to work experience in public companies. Further, we do not require a minimum number of consecutive years with employment data.[7] The variable GAI is standardized to have a mean of 0 and a standard deviation of 1.

One concern with using the variable GAI is that the weights obtained by Custódio et al. (2013), which they derive from a principal component analysis, might not be appropriate for our study. For robustness, we also use the 5 components of the GAI (X1–X5), shown in equation (1), as separate explanatory variables. However, the GAI is preferable econometrically as it mitigates concerns of measurement error and multicollinearity. In additional tests, we further use the variable UNWEIGHTED_GAI, which is the sum of the 5 unweighted components (X1–X5) of the GAI.

We also calculate the GAI for the successors of the departing executives. We denote the respective variable GAI_SUCCESSOR. In addition, we construct the variable NET_GAI as the

[7] While most studies on managerial work experience (see, e.g., Custódio et al. (2013), Custódio et al. (2017), Custódio and Metzger (2014), and Schoar and Zuo (2017)) do not mention incomplete track records, Dittmar and Duchin (2016) exclude executives with gaps in their resumes as these gaps might be nonrandom (but report that including them does not alter their findings). Specifically, such gaps can be correlated with executive and firm characteristics such as age, founder status, and tenure or size and industry, respectively. Using a large set of executive and firm controls in our regressions, we address potential concerns of nonrandom gaps in executives' track records. Furthermore, sabbaticals, long periods of illness or any other reasons for gaps in executives' resumes were not mentioned in any database, obituary or other press release.

difference between the GAI of the departing executive and the GAI of her successor. Positive (negative) values of this variable indicate that the successor has fewer (more) general managerial skills than the departing incumbent executive. The NET_GAI takes into account that in an efficient market, stock returns to turnover announcements of generalist executives incorporate investors' expectations of the general managerial skills of successors. That is, the stock price reaction reflects the net loss of general managerial skills. By using the variable NET_GAI, we assume (and test) that investors are rational and, on average, predict successors' skill sets reasonably well, taking into account that generalists are scarce managerial talents. Thus, the variable addresses the issue that both the GAI of the departing executive and that of her endogenously chosen successor matter to investors when a turnover is announced. We use the variable for additional analyses: i) to illustrate the supply of general managerial skills in the labor market, ii) to examine the effect of GAI on post-turnover operating performance, and iii) to study the combined stock returns to turnover announcements and successor appointments, which depends on the difference in GAIs between departing executives and their successors.

D. Estimating Abnormal Stock Returns

To calculate abnormal stock returns, we obtain daily stock return data from CRSP for each executive turnover event for a 255-day pre-event estimation period (from trading day −274 to −20). To determine expected returns, we mainly use a 4-factor model (Carhart (1997)). We use the value-weighted CRSP index as the market index and estimate betas using data from the pre-event window. We define the event date as the trading day on which the announcement of a turnover first became public information. In case this day is a non-trading day, the event date is defined as the next trading day following the first public announcement of the turnover.

As our main dependent variable, we use the cumulative abnormal return based on the 4-factor model for the 3 days surrounding the event date (i.e., from t −1 to t +1, with t indicating the

event date). We denote this variable CAR(−1,1)_4F. For robustness purposes, we use 3 alternative measures of the stock market reaction to sudden deaths: CAR(−1,1)_FF3, that is, the 3-factor model abnormal return (Fama and French (1993)), CAR(−1,1)_4F winsorized at the 5th and 95th percentiles, and the indicator variable CAR(−1,1)_4F_<_0, which equals 1 if the abnormal return CAR(−1,1)_4F is negative (and 0 otherwise). We also use alternative event windows for robustness. The respective variables are denoted CAR(−2,2)_4F, CAR(−3,3)_4F, CAR(−1,20)_4F, and CAR(−20, −2)_4F.

To determine abnormal stock returns to appointments of executives' successors, we use the same methodology as we use to calculate stock returns to executive turnovers. We denote the stock returns as SUCCESSOR_CAR(−1,1)_4F. Analyses that use this variable are based on fewer observations as appointment dates are not available for all successors. To examine the overall wealth effect of losing a generalist, we also calculate the combined abnormal stock return to executive turnovers and appointments of successors by summing up the two stock returns for each firm. We denote the respective variable SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F). We also calculate the above variables for an event window comprising 5 trading days.

E. Summary Statistics

Table 1 presents summary statistics for our sample of sudden executive deaths, the subsample of sudden CEO deaths, and the sample of other (non-sudden) exogenous CEO turnovers. Panel A shows the causes of sudden deaths. 46% (46%) of all (CEO) deaths are due to heart attacks or unknown heart failures, 29% (31%) are due to accidents, strokes, or (rarely) other reasons such as aneurysms, and the remaining 25% (24%) are cases of unspecified, but sudden and unexpected deaths (e.g., CEOs who died while on vacation). These numbers are almost identical to those reported in Nguyen and Nielsen (2014) and Jenter et al. (2016). Panel A also

shows the distribution of sudden deaths and other exogenous turnovers over time. 25% (21%) of all (CEO) sudden deaths occurred in the 1980s, 37% (37%) in the 1990s, and 38% (43%) in the 2000s or later. Regarding the non-sudden turnovers, 59% took place between 1993 and 1999 and 41% took place between 2000 and 2005. Most turnovers (40%) took place between 1998 and 2000.

*** Insert Table 1 here ***

Panels B and C of Table 1 provide summary statistics for the variables used in this study. All variables are defined in Appendix A. In the following, we focus on the subsample of suddenly deceased CEOs (Panel B) and the sample of non-sudden turnovers (Panel C) because most of our analyses are based on these samples. We first describe the summary statistics for sudden CEO deaths.

Regarding the stock price reaction to sudden CEO deaths, median and mean abnormal stock returns are found to be negative, but close to 0 and volatile. CAR(−1,1)_4F, for example, has a median (mean) of −0.6% (−0.03%) and a standard deviation of 9%. While some sudden deaths are associated with large declines in stock prices (as suggested by the 25th percentile, which amounts to −4.1%), others are associated with large increases (the 75th percentile is +2.9%). Stock returns to successor appointments show a similar pattern: SUCCESSOR_CAR(−1,1)_4F has a median (mean) of 0.6% (1%), a standard deviation of 9%, and shows large negative and positive values (the 25th and 75th percentiles amount to −1.6% and +3.4%, respectively). This heterogeneity of abnormal stock returns is consistent with the literature (see, e.g., Johnson et al. (1985), Nguyen and Nielsen (2014), Jenter et al. (2016), and Quigley et al. (2017)) and suggests that executive characteristics have potential explanatory power for the stock price reaction to sudden executive deaths.

In terms of the GAI, Panel B of Table 1 reports a median GAI of −0.17 for deceased CEOs, with a minimum and maximum value of −0.98 and 4.12, respectively (not reported). Custódio et al. (2013) report an almost identical median GAI of −0.18, with a minimum and maximum value of −1.50 and 7.23, respectively. The larger minimum and maximum values (in absolute terms) in Custódio et al. (2013) can be attributed to the much larger sample that the authors use. The median (mean) unweighted GAI for the CEOs in our sample is 9 (10.04), which compares well to the median and mean values (8 and 10.14, respectively) of the sum of the index components reported in Custódio et al. (2013). The median GAI and unweighted GAI for all executives (non-CEO executives: chairmen and presidents) in our sample is −0.16 and 9.5 (−0.17 and 10), respectively. The relatively high GAI values for non-CEO executives are driven by chairmen who typically had a long career over which they were able to acquire considerable managerial work experience.

Regarding the components of the GAI, the median (mean) CEO in our sample performed 4 (4.6) different positions and worked for 2 (2.7) different firms and in 2 (2.4) different 4-digit SIC industries over her career. 30% of the CEOs acquired CEO experience, that is, they previously worked as CEOs of other firms, and 14% worked for multi-division conglomerates before. Although the statistics for the components are generally in line with Custódio et al. (2013), some discrepancies exist: Custódio et al. (2013) report a higher median number of different positions (5 vs. 4), lower medians for the numbers of different firms and industries (1 vs. 2), and a higher share of CEOs with conglomerate experience (74% vs. 14%). We ascribe the discrepancies to differences between the samples and data sources that Custódio et al. (2013) and we use.[8] Nonetheless, we cannot rule out that the discrepancies simply reflect peculiarities of the

[8] First, while Custódio et al. (2013) analyze S&P 1500 companies between 1993 and 2007, we study a limited sample of smaller companies, which also includes the 1980s and a relatively high share of

sudden death data. We address this concern by using non-sudden exogenous turnovers and the GAI data provided directly by Custódio et al. (2013).

In terms of other CEO characteristics, the median (mean) age and tenure are 60 (59.7) and 10 (13.6) years, respectively. Thirty-three percent of the CEOs are the founders of the sample firms or the founder's offspring, 50% also hold the president title, and 2% have work experience with a consulting or law firm. These numbers are comparable to Jenter et al. (2016) and Johnson et al. (1985). The former report a median CEO age and tenure of 62 and 14 years, respectively, and a fraction of founder CEOs of 39%, while the latter report a mean CEO age and tenure of 61.8 and 13.5 years, respectively, and a fraction of founder CEOs of 28%.

Turning to firm and corporate governance characteristics, the firms in our sample have a mean (median) size in terms of total assets of $2,312 million ($202 million), a market-to-book ratio of 2.45 (1.79), and a return on assets (ROA), defined as income before extraordinary items to total assets, of −3% (4%). Mean (median) ROA based on EBITDA is 5% (10%) (not reported for brevity). Further, firms have mean (median) capital expenditures relative to net PPE of 21% (16%), a leverage ratio of 21% (20%), and R&D expense relative to total assets of 5% (0%). In terms of governance characteristics, the average board size is 8.4 directors, with 47% of the directors being neither insiders nor grey directors (64% post Sarbanes–Oxley Act of 2002). Thirty-five percent of all firms have boards with staggered election terms, 69% of CEOs also hold the title of the chairman of the board (DUALITY), and 85% of the deceased CEOs are

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founders. Given that CEOs of smaller companies and founders can be expected to be less likely to have work experience at large conglomerates and in many different positions, and given the decreasing number of conglomerates between the 1970s and 1980s, the significantly lower mean for conglomerate experience and the slightly lower number of past positions in our sample appears reasonable. Second, Custódio et al. (2013) use BoardEx as their only data source to gather information on past work experience and construct the GAI based on past work experience in only publicly traded companies, whereas we use several data sources and consider past work experience in both public and private companies. This difference might explain the slightly higher values for NUMBER_OF_FIRMS and NUMBER_OF_INDUSTRIES in our sample.

replaced by firm insiders as suggested by the variable SUCCESSOR_IS_FIRM_INSIDER.[9] The high fraction of CEO successions from inside the firm is consistent with Bebchuk, Cremers, and Peyer (2011), who report that 15% of CEOs are replaced by firm outsiders, and Borokhovich, Parrino, and Trapani (1996) who report a fraction of 19%.

Finally, Panel C of Table 1 presents summary statistics for the sample of other (non-sudden) exogenous CEO turnovers. The summary statistics are generally in line with those for the sample of sudden CEO deaths. Particularly, the mean and median stock market reaction to CEO turnovers is close to 0 and volatile as reflected in the median and standard deviation of CAR(−1,1)_4F, which is 0.27% and 5.8%, respectively. Median values for CAPEX (21%), LEVERAGE (23%), MTB (2.3), and ROA (5%) are also comparable to those for the sample of sudden deaths. However, firms subject to non-sudden turnovers are larger. Median firm size in terms of total assets is $1,989 million. Furthermore, both the median and mean GAI (0.21 and 0.28) and unweighted GAI (12 and 12.3) are higher than for the suddenly deceased CEOs. Higher GAI values are reasonable given the larger size of firms in the non-sudden turnover sample. Regarding the GAI components, the median and mean values for NUMBER_OF_FIRMS, NUMBER_OF_INDUSTRIES, and CEO_EXPERIENCE are comparable to the values reported for the sample of sudden CEO deaths, while the median and mean for NUMBER_OF_POSITIONS and CONGLOMERATE_EXPERIENCE are higher. Except for CEO_EXPERIENCE, the values for the GAI and its components are larger than those reported in Custódio et al. (2013). This discrepancy can at least in part be ascribed to the fact that the CEOs in the sample of non-sudden turnovers are on average 7 years older but only have 2 more years of tenure (i.e., they had more time to acquire managerial work experience before assuming the CEO

[9] To construct the variable SUCCESSOR_IS_FIRM_INSIDER, we read articles describing the replacement executive for up to a year after the sudden death of the incumbent executive.

position). In terms of other CEO characteristics, CEOs are older (63 years) than the suddenly deceased CEOs, are more likely to also hold the chairman role (78%), are less often replaced by firm insiders (77%), and have lower median tenure (8 years).

F. Determinants of the General Ability Index

In the following, we analyze the determinants (covariates) of the general ability index for the sample of sudden executive deaths, the sample of other (non-sudden) exogenous CEO turnovers, and the pooled sample of all CEO turnovers (i.e., sudden deaths and non-sudden turnovers). To this end, we estimate multivariate OLS regressions of the variable GAI on executive, firm, and governance characteristics. Executive characteristics include the variables AGE, CONSULT_OR_LAW_EXPERIENCE, FOUNDER, and TENURE. Firm characteristics include the variables CAPEX, FIRM_SIZE, LEVERAGE, MTB, ROA, and RD. Corporate governance characteristics include the variables BOARD_SIZE, DUALITY, INDEPENDENT_BOARD, PRESIDENT, STAGGERED_BOARD, and SUCCESSOR_IS_FIRM_INSIDER. For all samples, we estimate a baseline regression model that allows us to use all turnover cases and an extended regression model including additional control variables, which is based on fewer observations due to missing data for some variables. For the sample of non-sudden turnovers and the sample of all turnovers, CEO and corporate governance characteristics are limited to the variables AGE, DUALITY, SUCCESSOR_IS_FIRM_INSIDER, and TENURE in order not to lose too many observations due to unavailable data.[10]All regressions include time and industry fixed effects. For the limited sample of sudden (CEO) deaths, time fixed effects correspond to indicator variables for the

[10] Our empirical analyses based on the sample of sudden CEO deaths suggest that most CEO and governance characteristics, particularly those omitted in the regressions based on the sample of non-sudden exogenous turnovers, have no explanatory power for the general ability index or abnormal stock returns to CEO turnovers.

decades 1980s, 1990s, 2000s, and 2010s, whereas they correspond to indicator variables for each sample year for the larger sample of non-sudden CEO turnovers and for the pooled sample of all CEO turnovers. Industry fixed effects are based on 1-digit SIC codes for the sample of sudden deaths and 2-digit SIC codes otherwise. We estimate *t*-statistics using robust standard errors. Results are shown in Table 2.

*** Insert Table 2 here ***

Overall, the regression results reveal a consistent picture of the GAI determinants. The coefficient for the variable AGE is positive and statistically significant for the sample of sudden deaths and for the pooled sample of all CEO turnovers. This finding is in line with the notion that older executives had more time to acquire more managerial work experience. Further, we find that generalists tend to work for larger companies as indicated by a positive coefficient (found for all samples) on the variable FIRM_SIZE, which is consistent with models of competitive assignment of CEOs to firms (see, e.g., Gabaix and Landier (2008), Terviö (2008), and Eisfeldt and Kuhnen (2013)). For example, according to the model of Gabaix and Landier (2008), the marginal value of CEO talent, such as generalists, can be expected to increase in firm size, which allows larger firms to pay generalists more in order to attract them. We find no other consistently significant relations between firm or governance characteristics and the GAI. In unreported regressions, we use the variable UNWEIGHTED_GAI as the dependent variable and find similar results.

III. General Managerial Skills and Shareholder Value

In this section, we examine the impact of executives' general managerial skills on shareholder value. Specifically, we estimate regressions of the abnormal stock returns to announcements of exogenous executive turnovers on measures of general managerial skills (i.e.,

GAI, NET_GAI, UNWEIGHTED_GAI, and the GAI components). Following extant literature, we hypothesize that executives' general managerial skills have a positive impact on shareholder value as they facilitate management and leadership. If generalists are indeed beneficial for shareholders, we expect to find statistically significant, negative regression coefficients on our measures of general managerial skills. The negative coefficients reflect a reduction in shareholder value that results from the loss of valuable and costly-to-replace managerial skills (net of the successor's skills) at the helm of the firm. To test this hypothesis, we rely on sudden executive deaths as our primary testing laboratory, as these events are random and unexpected. However, because the number of sudden deaths is limited and because unexpected executive deaths force firms to find successors under pressure of time, the results might be unique to this type of CEO turnover. To address these concerns, we also report regression results based on the larger sample of arguably exogenous, non-sudden CEO turnovers. We additionally show all analyses for a pooled sample of all (i.e., sudden and non-sudden) CEO turnovers.

A. Empirical Results

We estimate regression models, which are similar in terms of control variables to those described in Section II.F and shown in Table 2. The sets of control variables we use follow the existing literature (see, e.g., Salas (2010) and Nguyen and Nielsen (2014)). The main dependent variable is CAR(−1,1)_4F (i.e., the stock market reaction in the 3 days symmetrically surrounding the announcement of an exogenous executive turnover). Results for the extended regression model are based on fewer observations due to data availability. We estimate t-statistics using robust standard errors. Regression results are presented in Table 3. Panel A shows the results for the sample of sudden deaths and Panel B shows the results for the sample of non-sudden CEO turnovers as well as for the pooled sample of all CEO turnovers.

*** Insert Table 3 here ***

In columns 1–3 of Panel A in Table 3, we display our results for the baseline regression model for the sample of all executive deaths (column 1), the sample of chairman and president deaths (column 2), and the sample of CEO deaths (column 3). While we find the coefficient on our variable of interest, GAI, to be negative in all 3 regressions, it is statistically significant only for the sample of all executive deaths (at the 10% level) and the sample of CEO deaths (at the 5% level). Hence, while sudden deaths of generalist CEOs, on average, are associated with significantly lower announcement returns, we cannot confirm that the stock market reaction to sudden deaths of chairmen and presidents depends on their level of general managerial skills.[11] Consequently, we focus on CEOs in the following.

Columns 4–6 of Panel A in Table 3 present the results of additional regressions estimated for robustness purposes. Specifically, column 4 shows the results of estimating an extended regression model that mitigates potential concerns of omitted variables. Including several additional controls, the coefficient on GAI remains qualitatively similar in terms of both statistical significance (at the 5% level) and magnitude. Columns 5 and 6 show results of re-estimating the extended regression model using two alternative measures of GAI, UNWEIGHTED_GAI and NET_GAI. Consistent with a positive effect of CEOs' general managerial skills on shareholder value, we find statistically significant, negative coefficients on both alternative variables.[12] The evidence suggests the following. First, our results do not depend on whether we weight the components of the GAI, as done in Custódio et al. (2013), or not.

[11] There are two reasons why we initially include chairmen and presidents. First, broader managerial work experience may enable chairmen and presidents to manage the firm more successfully and to provide more valuable advice and stricter monitoring. Second, several existing studies are based on sudden deaths of CEOs, presidents, and chairmen (see, e.g., Worrell, Davidson, Chandy, and Garrison (1986), Borokhovich, Brunarski, Donahue, and Harman (2006), Salas (2010), and Nguyen and Nielsen (2014)).

[12] In unreported regressions, we calculate the variable NET_GAI based on the unweighted GAI of the deceased CEO and her successor and find a significantly negative coefficient. Furthermore, all of our results remain qualitatively similar when we estimate the baseline (instead of the extended) regression model.

Second, our results remain significant when we take into account that the stock market reaction to sudden CEO deaths incorporates the general managerial skills of the deceased CEOs' expected successors. This approach tests whether (and suggests that) investors consider that generalists are scarce and costly to replace.

The aforementioned results hold when we use the larger sample of all suddenly deceased executives instead of the sample limited to CEO deaths (not reported). To address concerns of outliers, we present the results of median regressions, which minimize the sum of absolute (instead of squared) residuals, in Appendix B.[13] The coefficients on GAI, UNWEIGHTED_GAI, and NET_GAI all remain significant at the 5% level or better. Beyond their statistical significance, our results are also economically meaningful: a 1-standard-deviation increase in the GAI is associated with an average decline in abnormal stock returns of about 1.5 and 2.3 percentage points for the sample of all executive deaths and the sample of CEO deaths, respectively.

In terms of control variables, we find that the coefficients on AGE and FIRM_SIZE are positive and statistically significant. The positive coefficient on FIRM_SIZE is consistent with the notion that larger firms find it less difficult to hire a qualified successor for the deceased CEO. While CEO age itself should have little impact (as age is an attribute that is replaceable at low cost), the positive coefficient for AGE is likely to reflect that CEO deaths are less surprising for older CEOs and that firms run by older CEOs are more likely to have succession plans in place.

[13] Besides outliers, another concern of the relatively small sample of sudden deaths is multicollinearity. The pairwise correlations between the variables GAI and AGE (21%), CONSULT_OR_LAW_EXPERIENCE (23%), FIRM_SIZE (32%), LEVERAGE (16%), BOARD_SIZE (18%), FOUNDER (−19%), and PRESIDENT (−20%) are statistically significant. All other correlations are much lower. While variance inflation factors (VIFs) generally provide no indication of multicollinearity, decade fixed effects are associated with high VIFs (maximum = 11.79). Our results remain qualitatively similar when we exclude decade fixed effects or replace them with year fixed effects. We do not report these results for brevity.

In unreported tests, we find evidence that the latter is indeed the case. The coefficients on LEVERAGE, ROA, and SUCCESSOR_IS_FIRM_INSIDER are statistically significant as well, but the median regressions shown in Appendix B suggest that these results are likely to be driven by outliers. Importantly, none of the governance variables included in the extended regression model are found to have explanatory power for stock returns, generally consistent with Nguyen and Nielsen (2014).

Panel B of Table 3 presents regression results for the sample of other (non-sudden) exogenous CEO turnovers (columns 1–4) and for the pooled sample of all CEO turnovers (columns 5–8). Columns 1 and 2 and columns 5 and 6 show results of regressions of CAR(−1,1)_4F on GAI and controls. The regressions shown in columns 2 and 6 include CEO and governance characteristics in addition to firm, industry, and time controls, whereas the regressions shown in columns 1 and 5 omit these additional controls as they limit the number of observations. The coefficient on GAI is negative and significant at the 5% level in all 4 columns.[14] Similarly, when we re-estimate the regression shown in column 2 for both samples and replace the variable GAI by the variable UNWEIGHTED_GAI (columns 3 and 7) or the variable NET_GAI (columns 4 and 8), we find the coefficients on both variables to be negative and significant at the 5% level for UNWEIGHTED_GAI and the 10% level for NET_GAI. The relative weakness in terms of statistical significance of the coefficient on NET_GAI (which considers CEOs' successors) is in line with the notion that the larger firms in the sample of non-sudden turnovers find it easier to replace incumbent generalist CEOs with successors who also possess high general managerial skills. We provide corroborating evidence in Section IV. Taken

[14] In unreported analyses, we find statistically significant pairwise correlations between the variables GAI and CAPEX (−14%), DUALITY (22%), FIRM_SIZE (26%), and TENURE (−26%). While these variables do not drive variance inflation factors, the inclusion of 2-digit SIC industry fixed effects does (mean VIF = 5.6). When we repeat the regressions without industry fixed effects or control for 1-digit SIC codes, our results remain qualitatively similar.

together, the results presented in Panel B of Table 3 confirm our findings for the sample of sudden executive deaths and indicate that these findings are not unique to this special type of executive turnover.

Overall, the analyses shown in this section suggest that CEOs' general managerial skills are an important explanator of the stock price reaction to sudden and non-sudden exogenous CEO turnovers. The evidence indicates that generalist CEOs are beneficial for corporate shareholders and that the effect of generalists on shareholder value is economically meaningful.

B. Robustness

We perform additional tests to validate the robustness of our results. First, for all 3 samples of CEO turnovers we re-estimate the regressions shown in Table 3 using alternative abnormal stock returns as the dependent variable. The results of these regressions are provided in Appendix C. They suggest that the findings in Table 3 neither hinge on whether we calculate cumulative abnormal returns based on alternative event windows (e.g., CAR(−2,2)_4F) nor on whether we use alternative measures of abnormal stock returns (i.e., CAR(−1,1)_FF3 or the dummy CAR(−1,1)_4F < 0) or whether we winsorize stock returns at the 5th and 95th percentiles.

Second, for all 3 turnover samples we re-estimate the regressions shown in Table 3 and replace the variable GAI with each component (X1–X5) of the general ability index (separately): (1) NUMBER_OF_POSITIONS, (2) NUMBER_OF_FIRMS, (3) NUMBER_OF_INDUSTRIES, (4) CEO_EXPERIENCE, and (5) CONGLOMERATE_EXPERIENCE. The regression results are presented in Table 4. Panels A, B, and C show the results for sudden CEO deaths, other exogenous CEO turnovers, and all CEO turnovers, respectively. Coefficients on the control variables are not reported for brevity.

*** Insert Table 4 here ***

All 3 panels of Table 4 reveal a similar picture: we find the regression coefficients on NUMBER_OF_POSITIONS, NUMBER_OF_FIRMS, and NUMBER_OF_INDUSTRIES to be negative and statistically significant (at the 10% level or better). More generally, for all 3 samples, the coefficients on all GAI components have the expected (negative) sign, except for the coefficient on CONGLOMERATE_EXPERIENCE in Panel A. Overall, these results corroborate our evidence provided in Section III.A and indicate that among the components of the general ability index investors consider work experience in different firms, industries, and positions to be most valuable.

Lastly, we consider alternative explanations for our results. In this regard, one concern is that investors might systematically underestimate the likelihood that generalist CEOs die or depart for other reasons (in line with the negative coefficient on GAI). Our data does not support this interpretation. If anything, it supports the view that deaths of generalists should be less surprising as generalists tend to be older and work for larger companies (see Table 2), for which more information is available. CEOs with a GAI above the median are 61 years old on average, whereas CEOs with lower general managerial skills are 58 years old and, thus, are less likely to die. This evidence runs against us finding a significantly negative coefficient on the variable GAI. Regarding non-sudden turnovers, both CEOs with and without a GAI above the median are 62 years old on average. Hence, departures of generalist CEOs are not particularly surprising.

Another alternative explanation for our results is that the variable GAI might capture CEOs' innate talent, education, and network, which are likely to be both beneficial for shareholders and costly to replace. To address this concern, we re-estimate the regressions shown in Table 3 adding additional control variables. The results are shown in Table 5. We use two established measures to control for executive talent. In column 1, we additionally control for the variable FIRST_CEO_AGE, proposed by Custódio et al. (2013) and Falato et al. (2015), which

measures the age at which a CEO became CEO for the first time.[15] In column 2, we alternatively control for CEO talent by adding the variable TENURE/AGE, proposed by Bhagat and Bolton (2013). It is defined as the ratio of a CEO's tenure to her age. The rationale for this variable is that the longer a CEO has been in a top position relative to her age, the more talented she is likely to be. In columns 3 and 4, we address the concern that generalist CEOs are more valuable to shareholders because they are better educated and have more valuable networks. We again follow Custódio et al. (2013) in terms of additional controls. In column 3, we additionally control for the indicator variable IVY_LEAGUE, which equals 1 if a CEO graduated from an Ivy League school, and 0 otherwise. In column 4, we use the indicator variable MBA, which equals 1 for CEOs with a masters in business administration (MBA) degree, and 0 otherwise. While both variables measure the level of CEO education, they also capture the networks associated with this education. Information on CEOs' education comes from the same biographic data sources from which we collect executives' work experience. However, these data are not available for all CEOs in our sample. Accordingly, regressions that use education variables are based on fewer observations.

*** Insert Table 5 here ***

As can be seen from both Panel A of Table 5, which shows the results for the sample of sudden deaths, and Panel B, which shows the results for non-sudden and for all CEO turnovers, the coefficient on GAI remains negative and statistically significant (at the 10% level or better) after controlling for CEO talent, education, and network. Columns 5 and 6 of both panels show that the coefficient on GAI remains significant even when we simultaneously control for

[15] Custódio et al.'s (2013) results suggest that the GAI does not significantly capture innate talent. In unreported tests, we find a positive correlation of 16% (19%) between FIRST_CEO_AGE and GAI for the sample of sudden CEO deaths (the sample of non-sudden turnovers). The median for FIRST_CEO_AGE of deceased CEOs (CEOs in the sample of non-sudden turnovers) is 48 (50) years, which is comparable to the value of 49 years reported in both Custódio et al. (2013) and Falato et al. (2015).

FIRST_CEO_AGE, IVY_LEAGUE, and MBA.[16] This result holds when we estimate a median regression, as shown in column 2 of Appendix B, to address the concern that the number of observations available for the sample of sudden deaths is relatively small. In sum, alternative explanations are unlikely to drive our results.

IV. The Incoming CEO

Econometrically, an optimal setting to test the impact of CEO characteristics on firm performance and value is one that allows to assess how firm outcomes vary with changes in a firm's exposure to its CEO while holding the endogenous CEO-firm match constant (see Bennedsen et al. (2017)). Obviously, studies that use exogenous CEO turnover, including our study, cannot rely on such an optimal setting. That is, while the instrument of exogenous turnover, particularly sudden deaths, can address concerns of endogenous matching between incumbent CEOs and firms, it cannot directly address the concern that the choice of a CEO's successor is a nonrandom decision, which is likely to be affected by the incumbent CEO's skill set. Exogenous firm conditions (such as a firm's rural location and small size), which make it difficult for firms to attract generalist successors, and an efficient stock market that incorporates the expected successor's skills into the price reaction to CEO turnover mitigate the concern of endogenous CEO succession. Nonetheless, studying only the announcement returns to turnovers might not completely address endogenous CEO succession and ignores additional informative analyses.

Accordingly, in this section we study the incoming CEO beyond the use of the (look-ahead) variable NET_GAI as an explanator of abnormal stock returns to exogenous CEO turnover. Specifically, we attempt to answer the following questions: Does the loss of a generalist

[16] In unreported regressions, we find qualitatively similar results when we use the variables UNWEIGHTED_GAI or NET_GAI instead of GAI. Furthermore, additional unreported regressions based on the sample of sudden deaths not limited to CEOs yield qualitatively similar results for all measures of general managerial ability.

lead to poor operating performance following exogenous CEO turnover? Do firms replace lost general human capital and is this form of capital scarce? Does the stock market reaction to successor appointments provide information about the value of successors' general managerial skills (for firms that are less likely to replace the loss of general human capital)?

A. Changes in Operating Performance After Exogenous Turnovers

We now address the question whether the significantly larger reduction in shareholder value in reaction to exogenous turnovers of generalists reflects anticipated changes in firms' operating performance after these events. To this end, we directly examine whether changes in general managerial skills at the top of the firm, as measured by the variables NET_GAI and GAI_SUCCESSOR, are associated with changes in operating performance. To the best of our knowledge, the only other study that considers changes in firm performance after exogenous executive turnover is Jenter et al. (2016). They find no significant performance changes after CEO deaths using the profit margin and return on assets (ROA) as measures of operating performance. Following the authors, we rely on the same performance measures, which we use for two types of analyses. First, for each event firm and year, we compute the industry-adjusted profit margin (and industry-adjusted ROA) as the difference between the profit margin (ROA) and the median profit margin (ROA) in the firm's respective 2-digit SIC industry. We denote the resulting variables IND_ADJ_PROFIT_MARGIN and IND_ADJ_ROA. To analyze changes in operating performance after sudden deaths and other non-sudden turnovers, we use the variables $\text{IND\_ADJ\_PROFIT\_MARGIN}_{t-1} - \text{Ø\_IND\_ADJ\_PROFIT\_MARGIN}_{t+1 - t+3}$ and $\text{IND\_ADJ\_ROA}_{t-1} - \text{Ø\_IND\_ADJ\_ROA}_{t+1 - t+3}$. That is, we subtract the average industry-adjusted firm performance (either profit margin or ROA) in the 3 fiscal years after the event year t (t+1, t+2, and t+3) from the industry-adjusted firm performance in the fiscal year preceding the event year (t−1). We then estimate regressions of each of these 2 measures of performance

changes on NET_GAI, controls for firm characteristics, the indicator variable SUCCESSOR_IS_FIRM_INSIDER, and time fixed effects. Alternatively, we estimate regressions of the variables Ø_IND_ADJ_PROFIT_MARGIN$_{t+1-t+3}$ and Ø_IND_ADJ_ROA$_{t+1\,-\,t+3}$ (i.e., average industry-adjusted performance in the 3 fiscal years after the event year) on the variable GAI_SUCCESSOR and the same set of control variables. We estimate *t*-statistics using robust standard errors. The results of the post-turnover performance tests are presented in Table 6. Panel A shows results for performance measures based on the profit margin and Panel B shows results based on ROA. Again, we show all results for the sample of sudden deaths, the sample of non-sudden turnovers, and the pooled sample of all turnovers.

*** Insert Table 6 here ***

We find some evidence that changes in general managerial skills due to exogenous CEO turnover are associated with future performance changes. In particular, in columns 1–3 of Panel A in Table 6 we find a positive relation, significant at the 10% level or better, between the average 3-year post-turnover profit margin and the variable GAI_SUCCESSOR for all 3 turnover samples. This finding indicates that successors with higher GAI values are associated with better industry-adjusted performance after exogenous turnovers, which points to the value of generalists. For the sample of non-sudden turnovers, we also find a positive coefficient on NET_GAI, significant at the 10% level, for both measures of performance changes (see column 5 in Panels A and B). This result indicates that larger differences between the GAIs of the departing CEO and her successor are associated with larger differences between pre- and post-turnover operating performance. Hence, if general managerial skills at the top of the firm cannot fully be replaced, both profit margin and ROA decline relative to their pre-turnover level. Overall, this evidence is consistent with the lower stock returns to exogenous turnovers of generalists shown in Section III.

B. Do Firms Replace Lost General Human Capital?

Given the negative consequences for shareholder value and operating performance associated with the departure of generalists, we can expect firms to attempt to minimize the loss of valuable general human capital when they make CEO succession decisions (either before or after a CEO's departure). In the following, we examine the relation between the general managerial skills of departing CEOs and those of their successors to address the questions whether firms replace lost general human capital and whether generalists are scarce managerial talents.

Figure 1 shows that the share of generalists increased over our sample period 1980-2012, in line with Custódio et al. (2013). Figure 2 illustrates the supply of general managerial skills in the executive labor market between 1980 and 2012. It shows the development of mean NET_GAI per annum for all exogenous CEO turnover events. The average difference between the incumbent CEO's GAI and that of her successor has declined continuously, consistent with an increasing net supply of general human capital and the increase of generalists over time. However, the figure also suggests that until the mid-2000s the average firm did not fully replace lost general human capital.[17]

*** Insert Figures 1 and 2 here ***

Table 7 presents the results of multivariate analyses of the relationship between successors' GAIs and departing CEOs' GAIs. Columns 1, 3, and 5 show the results of regressions of the variable GAI_SUCCESSOR on GAI for the sample of sudden deaths, the sample of non-

[17] While generalists likely have become more valuable over time as argued by Murphy and Zabojnik (2004) and Frydman (2015), firms have become increasingly capable of compensating the loss of general managerial skills as a result of the growing supply of generalists in the labor market. This conclusion is in line with the increasing share of generalists shown in Figure 1. Accordingly, in unreported regressions of CAR(−1,1)_4F on interaction terms of the variables GAI or NET_GAI with a continuous time variable (and the controls used before) we find the coefficients on the interaction terms to be statistically insignificant.

sudden turnovers, and the pooled sample of all turnovers, respectively. The control variables include CEO and firm characteristics (as used before) as well as time and industry fixed effects. The regression based on the sample of sudden deaths additionally includes the variables BOARD_SIZE, FOUNDER, INDEPENDENT_BOARD, and STAGGERED_BOARD. As before, we use t-statistics estimated with robust standard errors. While we find a positive coefficient on the variable GAI for all samples, the coefficient is statistically significant (at the 1% level) only for the sample of non-sudden turnovers and the pooled sample of all turnovers. This finding suggests that, on average, firms subject to non-sudden turnovers replace high-GAI incumbent CEOs with high-GAI successors. However, firms subject to sudden deaths, which constitute unexpected and arguably unexperienced shocks to corporations that leave them with only limited time to find successors, are unable to systematically compensate the loss of generalists. In unreported tests, we find that those firms in our sample of sudden deaths that engage in succession planning are significantly more likely to replace generalist CEOs with high-GAI successors.[18] This result suggests that firms take general human capital into account when

[18] For the years 1992-2012, we hand-collect information about succession planning from several data sources, particularly 8-Ks, 10-Ks, DEF 14As, board and board committee charters, and obituaries. For the years preceding 1992, we assume that firms do not engage in succession planning. We find that 22% of the firms in the sudden death sample have a succession plan (29% of the firms between 1992 and 2012). In most of these cases, firms do not provide details about how their succession plans look like (i.e., they do not state the identity of the potential CEO successor). We find that only 24% of firms that engage in succession planning appoint successors who possess a lower level of general managerial skills than their deceased predecessors, while the number increases to 47% for firms without succession planning (not reported). This difference is statistically significant at the 5% level.

they make succession decisions. Turning to our control variables, we find (for all samples) that larger firms appoint successors who possess more general managerial skills, consistent with models of competitive assignment of CEOs to firms, especially Gabaix and Landier (2008). We also find that CEO successors recruited from inside the firm have fewer general managerial skills.

*** Insert Table 7 here ***

Columns 2, 4, and 6 of Table 7 show results of regressions of the indicator variable GAI_SUCCESSOR_<_GAI, which equals 1 if the successor's GAI is lower than that of the incumbent CEO (and 0 otherwise), on the GAI of the departing CEO and the same control variables as used in the aforementioned regressions. For all 3 samples, we find the coefficient on GAI to be positive and statistically significant at the 1% level. This finding suggests that the higher a departing CEO's GAI, the less likely are firms to fully compensate the loss in general human capital at the top, consistent with generalists being scarce managerial talents.

C. Abnormal Stock Returns to CEO Successor Appointments

The previous analysis suggests that, on average, firms subject to non-sudden turnovers tend to replace high-GAI CEOs with high-GAI successors. However, we do not find that firms subject to sudden deaths systematically replace deceased generalists with generalist successors. As a consequence, investors may not be able to correctly anticipate and price the skills of expected successors at the announcement of sudden deaths. Accordingly, for firms whose CEOs die suddenly we can expect an average positive relation between a successor's GAI and the abnormal stock return to her appointment, which constitutes a (partly) reversal of the negative price effect caused by the incumbent CEO's death. This positive stock price reaction to the successor's GAI should be stronger for firms that investors expect to be less likely to replace lost general human capital. As the stock price reaction to successor appointments after non-sudden

CEO turnovers might still include price-relevant information, we examine both sudden and non-sudden turnovers.

Table 8 presents the results of regressions of SUCCESSOR_CAR(−1,1)_4F on GAI_SUCCESSOR and controls for firm and governance characteristics. If generalists indeed benefit shareholders and if the stock market cannot accurately or does not fully incorporate the expected successor's general managerial skills, we expect to find a positive coefficient on GAI_SUCCESSOR. Panel A shows the results for the sample of sudden deaths and Panel B shows the results for the sample of non-sudden turnovers and for the pooled sample of all turnovers. As before, we use t-statistics estimated with robust standard errors.

*** Insert Table 8 here ***

Regarding sudden deaths, the results shown in Panel A suggest that the stock price reaction to successor appointments after unexpected deaths of incumbent CEOs is positively related to successors' GAIs, as expected. Specifically, the coefficient on GAI_SUCCESSOR is positive and significant at the 10% level in column 1, which shows results for the full sample of CEO successions. In columns 2 and 3, we present results for firms headquartered in rural versus urban areas. We classify firms as being located in a rural area if they are not headquartered in one of the 50 largest U.S. metropolitan areas based on the Urban Area List of the U.S. Census Bureau. Columns 4 and 5 show results for small versus large firms (based on median firm size). Smaller firms and those located in more rural areas should be expected to be less likely to hire generalists as they cannot afford to pay CEOs as much as larger firms and because they have to recruit from a limited local labor market. In addition, asymmetric information is likely to be higher for smaller and rural firms. Consistent with this prediction, the results shown in columns 2–5 suggest that the positive, weakly significant effect of GAI_SUCCESSOR in column 1 is driven by firms that can be expected to have a more difficult time hiring a generalist CEO. Particularly, the coefficient on

GAI_SUCCESSOR is positive and significant at the 5% and the 10% level, respectively, for firms located in rural areas and for smaller firms, for which hiring a generalist is more of a surprise to investors.

Panel B of Table 8 presents the results for the sample of non-sudden CEO turnovers and for the pooled sample of all CEO turnovers. For both samples, we find no significant relation between SUCCESSOR_CAR(−1,1)_4F and GAI_SUCCESSOR as suggested by columns 1 and 3. In unreported regressions, we examine subsamples based on firm location and size similar to the regressions shown in Panel A. We find the coefficient on GAI_SUCCESSOR to be statistically insignificant in 9 out of 10 regressions. The coefficient is only statistically significant (at the 10% level) and positive for the subsample of small firms when we use the pooled sample of all turnovers. When we use SUCCESSOR_CAR(−2,2)_4F as an alternative dependent variable to address potential concerns of event uncertainty (see columns 2 and 4), we find the coefficient on GAI_SUCCESSOR to be positive and significant (at the 5% level) for the pooled sample of all turnovers.

Taken together, the results shown in Table 8 suggest the following. In case of unexpected turnovers caused by sudden deaths of incumbent CEOs investors may not be able to correctly anticipate and price the skills of expected successors and, thus, the stock market reaction to successor appointments conveys price-relevant information about managerial talent. The stock market reaction to non-sudden CEO turnovers, on average, accurately incorporates the skills of the expected successor, consistent with the evidence that firms subject to non-sudden turnovers systematically replace lost general human capital (see Table 7).

Given the evidence of reversibility of the stock price reaction to sudden CEO deaths, we perform an additional test. Panel A of Table 9 shows results from regressions of the overall stock market reaction to both the announcement of the sudden death of the incumbent CEO and the

appointment of her successor, that is, SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F), on the variable NET_GAI and the controls used in Panel A of Table 8. Because the stock market reactions to announcements of sudden CEO deaths and subsequent successor appointments both reveal information about the value of general managerial skills, analyzing the overall stock market reaction to both events allows us to accurately assess whether generalists matter for shareholders. Specifically, what investors value is the loss in general human capital at the top of the firm, which we measure via the difference in the general ability index between the deceased CEO and her successor. Consistent with a positive effect of generalists on shareholder value, column 1 shows a negative coefficient on NET_GAI, significant at the 5% level. That is, the more general human capital a firm loses due to the death of a CEO, the more shareholder value is destroyed. The results shown in columns 2–5 further suggest that the average reduction in shareholder value due to the loss of generalist CEOs is driven by small firms and firms located in rural areas, which are less likely to be able to replace lost general human capital.

Panel B of Table 9 reports the results of regressions of the overall stock market reaction to non-sudden and all CEO turnovers and subsequent successor appointments on NET_GAI and the control variables used in Panel B of Table 8. Columns 1 and 3 show results of regressions, which use SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F) as the dependent variable. While the coefficient on NET_GAI is negative in both columns, it is statistically significant (at the 1% level) only in column 3 (i.e., for the pooled sample of all turnovers). Unreported regressions using subsamples based on firm location and size support the pattern shown in Panel A, but only for the sample of all turnovers. When we use a broader event window, that is, we use SUM(CAR(−2,2)_4F + SUCCESSOR_CAR(−2,2)_4F) as the dependent variable, the coefficient on NET_GAI is negative and significant for both samples, as shown in columns 2 and 4.

*** Insert Table 9 here ***

Overall, Section IV provides additional evidence that generalist CEOs benefit shareholders and that firms compete for this scarce managerial talent. Importantly, given that firms' succession decisions are not random, the results in this section point to the necessity of studying the incoming CEO in order to accurately assess the supply and value of CEO talent.

V. Conclusions

Using a large sample of turnovers that are arguably exogenous to firm conditions, this study provides evidence for a positive and economically meaningful impact of generalist CEOs on shareholder value. The main findings are as follows. First, the higher a CEO's general ability index, both independently and relative to her successor, the lower is the (combined) abnormal stock return in reaction to turnover announcements (and successor appointments). Second, there is some evidence that this stock market reaction reflects changes in post-turnover operating performance. Third, on average firms replace generalists with generalist successors after non-sudden CEO turnovers, but not after sudden deaths. Consistently, for sudden deaths stock returns to appointments of generalist successors are positive, particularly for smaller firms and those located in rural areas, which are less likely to replace lost general human capital.

The results of this study provide a market-based explanation for the documented increase in the demand for generalists and for the generalist pay premium. In addition, the results provide further evidence that CEOs impact firm value and performance and that they differ with regard to the skills that enable them to do so. This evidence suggests that corporate boards, executive recruiting firms, and investors should take general managerial skills into account when they seek or evaluate CEOs and their successors.

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FIGURE 1

General Managerial Skills over Time

Figure 1 shows the mean GAI per annum based on the samples of sudden deaths and other exogenous CEO turnovers. GAI is defined as in Custódio, Ferreira, and Matos (2013) and is standardized to have a mean of 0 and a standard deviation of 1.

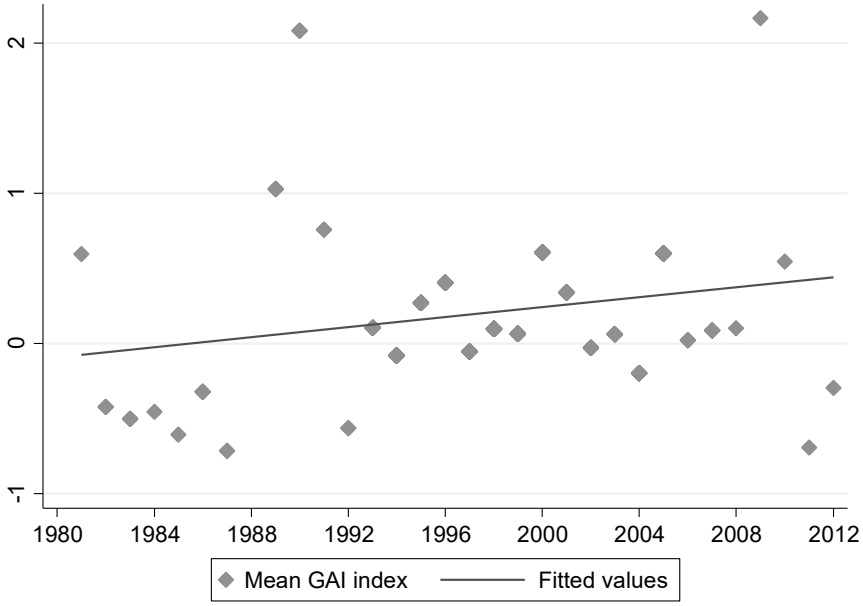

FIGURE 2

Net GAI over Time

Figure 2 shows the mean net GAI per annum based on the samples of sudden deaths and other exogenous CEO turnovers. Net GAI is defined as the GAI of the incumbent CEO who leaves the company minus the GAI of his or her successor.

TABLE 1

Summary Statistics

Table 1 provides summary statistics for the sample of sudden executive deaths and the sample of other (non-sudden) exogenous CEO turnovers. The latter comprises exogenous turnovers as classified and provided by Eisfeldt and Kuhnen (2013). Panel A of this table shows the distribution of executive turnovers over time and the causes of sudden deaths. Sudden deaths for which the cause of death is either a murder, an overdose, or a suicide are excluded from the sample as they could be related to past firm performance. Panels B and C present summary statistics for executive, firm, and corporate governance characteristics for the sample of sudden deaths and the sample of other exogenous (non-sudden) turnovers, respectively. In Panel B, summary statistics are shown for both the full sample of all sudden executive (i.e., CEOs, chairmen, and presidents) death events and for the sample of sudden CEO deaths. Variables are defined in Appendix A.

TABLE 1 (continued)

Panel A. Distribution of Executive Turnover Events over Time and Causes of Sudden Deaths

	All Sudden Deaths	Sudden CEO Deaths ($N = 101$)
Sudden Deaths (N = 164)		
Accident, stroke, other (e.g., aneurysm)	29.3%	30.7%
Heart attack or unknown heart failure	45.7%	45.5%
Unspecified but unexpected	25.0%	23.8%
1980s	25.0%	20.8%
1990s	37.2%	36.6%
2000–2012	37.8%	42.6%
Other Exogenous Turnovers (N = 345)		
1993	4.3%	
1994	5.8%	
1995	5.8%	
1996	8.1%	
1997	8.1%	
1998	12.7%	
1999	14.2%	
2000	13.6%	
2001	2.6%	
2002	0.9%	
2003	4.1%	
2004	6.1%	
2005	13.6%	

TABLE 1 (continued)

Panel B. Executive, Firm, and Governance Characteristics: Sudden Deaths

Variables	*N*	Median	P25	P75	Mean	Std. Dev.
All Sudden Deaths						
CAR(−1,1)_FF3	164	-0.001	-0.033	0.036	0.003	0.09
CAR(−1,1)_4F	164	-0.003	-0.034	0.035	0.003	0.09
CAR(−1,1)_4F < 0	164				0.524	0.50
GAI	164	-0.16	-0.77	0.37	0.00	1.00
AGE	164	62.00	54.50	69.00	61.98	11.38
CEO	164				0.62	0.49
CHAIRMAN	164				0.68	0.47
CONSULT_OR_LAW_EXPERIENCE	164				0.04	0.20
FOUNDER	164				0.29	0.46
PRESIDENT	164				0.46	0.50
TENURE	164	11.50	4.00	23.50	14.96	13.44
CAPEX	156	0.17	0.11	0.28	0.23	0.18
FIRM_SIZE (ln (TOTAL_ASSETS))	164	5.48	3.81	7.34	5.58	2.34
LEVERAGE	164	0.20	0.04	0.35	0.21	0.18
MTB	164	1.69	1.12	2.96	2.37	1.87
ROA	164	0.04	-0.01	0.08	-0.02	0.20
RD	164	0.00	0.00	0.02	0.04	0.11
BOARD_SIZE	160	8.00	6.00	11.00	8.60	3.22
DUALITY	164				0.43	0.50
INDEPENDENT_BOARD	160				0.33	0.47
STAGGERED_BOARD	159				0.37	0.49
SUCCESSOR_IS_FIRM_INSIDER	164				0.90	0.30
Sudden CEO Deaths						
CAR(−1,1)_FF3	101	-0.006	-0.040	0.031	-0.001	0.09
CAR(−1,1)_4F	101	-0.006	-0.041	0.029	-0.0003	0.09
CAR(−1,1)_4F < 0	101				0.584	0.50
SUCCESSOR_CAR_(−1,1)_4F	95	0.006	-0.016	0.034	0.010	0.09
GAI	101	-0.17	-0.84	0.33	0.00	1.00
NUMBER_OF_POSITIONS	101	4.00	2.00	6.00	4.56	3.62
NUMBER_OF_FIRMS	101	2.00	1.00	4.00	2.69	2.17
NUMBER_OF_INDUSTRIES	101	2.00	1.00	3.00	2.36	1.79
CEO_EXPERIENCE	101				0.30	0.46
CONGLOMERATE_EXPERIENCE	101				0.14	0.35
UNWEIGHTED_GAI	101	9.00	4.00	13.00	10.05	7.11
NET_GAI	95	-0.57	-1.96	1.02	-0.48	2.82
AGE	101	60.00	54.00	64.00	59.74	10.09
CONSULT_OR_LAW_EXPERIENCE	101				0.02	0.14
FOUNDER	101				0.33	0.47
PRESIDENT	101				0.50	0.50
TENURE	101	10.00	4.00	21.00	13.59	12.37
CAPEX	95	0.16	0.10	0.26	0.21	0.17
FIRM_SIZE (ln (TOTAL_ASSETS))	101	5.31	3.68	7.18	5.39	2.41
LEVERAGE	101	0.20	0.02	0.36	0.21	0.20
MTB	101	1.79	1.20	3.05	2.45	1.88
ROA	101	0.04	-0.01	0.08	-0.03	0.20
RD	101	0.00	0.00	0.03	0.05	0.11
BOARD_SIZE	99	7.00	6.00	11.00	8.38	3.28
DUALITY	101				0.69	0.46
INDEPENDENT_BOARD	99				0.39	0.49
STAGGERED_BOARD	99				0.35	0.48
SUCCESSOR_IS_FIRM_INSIDER	101				0.85	0.36

TABLE 1 (continued)

Panel C. Executive, Firm, and Governance Characteristics: Other (Non-Sudden) Exogenous Turnovers

Variables	*N*	Median	P25	P75	Mean	Std. Dev.
CAR(−1,1)_FF3	345	0.002	-0.019	0.025	0.001	0.06
CAR(−1,1)_4F	345	0.003	-0.019	0.026	0.001	0.06
CAR(−1,1)_4F < 0	345				0.481	0.50
SUCCESSOR_CAR (−1,1)_4F	322	0.004	-0.017	0.028	0.005	0.05
GAI	345	0.21	-0.54	0.88	0.28	1.07
NUMBER_OF_POSITIONS	345	7.00	4.00	9.00	6.97	3.42
NUMBER_OF_FIRMS	345	2.00	1.00	3.00	2.21	2.14
NUMBER_OF_INDUSTRIES	345	2.00	1.00	3.00	1.96	1.84
CEO_EXPERIENCE	345				0.34	0.48
CONGLOMERATE_EXPERIENCE	345				0.82	0.37
UNWEIGHTED_GAI	345	12.00	7.00	16.00	12.30	7.10
NET_GAI	326	0.24	-0.41	0.96	0.25	1.17
AGE	318	63.00	59.00	65.00	62.00	6.31
DUALITY	337				0.78	0.41
PRESIDENT	337				0.10	0.30
SUCCESSOR_IS_FIRM_INSIDER	345				0.77	0.42
TENURE	337	8.00	5.00	14.00	10.82	8.94
CAPEX	345	0.21	0.14	0.34	0.26	0.17
FIRM_SIZE (ln(TOTAL ASSETS))	345	7.59	6.47	8.95	7.73	1.71
LEVERAGE	345	0.23	0.12	0.35	0.24	0.16
MTB	345	2.27	1.51	3.58	3.07	2.23
ROA	345	0.05	0.03	0.09	0.05	0.05
RD	345	0.00	0.00	0.04	0.03	0.04

TABLE 2

Determinants of General Managerial Skills

Table 2 reports ordinary least squares (OLS) regression results based on the sample of sudden executive (CEOs, chairmen, and presidents) deaths (Panel A) as well as the sample of other exogenous CEO turnovers and the pooled sample of all CEO turnovers (i.e., sudden deaths and other exogenous turnovers) (Panel B). The variable GAI (i.e., general ability index) is regressed on executive, firm, and governance characteristics as well as time and industry fixed effects. Time fixed effects correspond to decade (year) fixed effects in Panel A (Panel B). Industry fixed effects correspond to 1-digit (2-digit) SIC industries in Panel A (Panel B). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 2 (continued)

Panel A. Sudden Executive Deaths

	Dependent Variable: GAI			
	All Sudden Deaths		w/o CEOs	Sudden CEO Deaths
Variables	1	2	3	4
Executive Characteristics				
AGE	0.0430**	0.0377*	0.0716*	0.0299
	(2.254)	(1.812)	(1.912)	(1.116)
CONSULT_OR_LAW_EXPERIENCE	2.1892***	1.9783**	2.3589**	2.0904
	(2.747)	(2.341)	(2.339)	(1.485)
FOUNDER	-0.7259	-0.9867**	-1.5773	-0.0858
	(-1.647)	(-1.994)	(-1.396)	(-0.144)
TENURE	0.0030	0.0051	0.0000	-0.0096
	(0.215)	(0.346)	(0.001)	(-0.510)
Firm Characteristics				
FIRM_SIZE	0.2645***	0.3282***	0.3436	0.3745***
	(2.779)	(3.348)	(1.397)	(3.128)
MTB	0.1660*	0.1175	0.3159	0.0036
	(1.664)	(1.030)	(1.235)	(0.033)
ROA	-1.5004	0.4612	1.7073	-0.3890
	(-1.429)	(0.246)	(0.431)	(-0.165)
CAPEX		0.7649	-0.7566	1.9388
		(0.753)	(-0.383)	(1.242)
LEVERAGE		1.0691	3.8029	-0.4114
		(0.954)	(1.159)	(-0.300)
RD		5.2292	8.8950	2.9979
		(1.629)	(1.587)	(0.772)
Governance Characteristics				
BOARD_SIZE		-0.0383	-0.3635***	0.1662
		(-0.518)	(-2.804)	(1.576)
DUALITY		0.1921		0.1817
		(0.511)		(0.331)
INDEPENDENT_BOARD		0.1419	0.0251	-0.4805
		(0.403)	(0.037)	(-0.931)
PRESIDENT		-0.7618**	-0.3227	-0.9043**
		(-2.489)	(-0.517)	(-2.342)
STAGGERED_BOARD		-0.2980	-0.3880	-0.2621
		(-0.959)	(-0.804)	(-0.566)
SUCCESSOR_IS_FIRM_INSIDER		-0.6250	1.2075	-0.9849
		(-0.904)	(0.758)	(-1.375)
Decade fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
No. of obs.	164	151	58	93
R^2	0.291	0.360	0.534	0.472

TABLE 2 (continued)

Panel B. Other/All Exogenous Turnovers

	Dependent Variables: GAI			
	Other Exogenous Turnovers		All Turnovers	
Variables	1	2	3	4
AGE		0.0180 (1.533)		0.0210** (2.532)
DUALITY		0.4009*** (3.016)		0.2067 (1.585)
PRESIDENT		0.1211 (0.456)		0.0352 (0.214)
SUCCESSOR_IS_FIRM_INSIDER		0.1274 (0.678)		0.0940 (0.587)
TENURE		-0.0298*** (-3.928)		-0.0227*** (-3.554)
CAPEX	-0.7156 (-1.401)	-0.2394 (-0.466)	-0.4214 (-1.073)	-0.1093 (-0.271)
FIRM_SIZE	0.2288*** (4.868)	0.1584*** (2.840)	0.2063*** (6.424)	0.1577*** (4.397)
LEVERAGE	0.2553 (0.492)	0.2609 (0.484)	0.0816 (0.218)	0.0153 (0.040)
MTB	0.0338 (0.876)	0.0383 (0.936)	0.0134 (0.447)	0.0144 (0.453)
ROA	-0.6007 (-0.382)	-0.5082 (-0.317)	-0.0503 (-0.080)	-0.3610 (-0.581)
RD	2.3523 (1.081)	0.0647 (0.031)	1.7826 (1.302)	0.6545 (0.478)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
No. of obs.	345	310	440	405
R^2	0.326	0.367	0.348	0.375

TABLE 3

General Managerial Skills and Shareholder Value

Table 3 reports results from OLS regressions based on the sample of sudden executive (CEOs, chairmen, and presidents) deaths (Panel A) as well as the sample of other exogenous CEO turnovers and the pooled sample of all turnovers (i.e., sudden deaths and other exogenous turnovers) (Panel B). Carhart (1997) 4-factor abnormal stock returns (CAR(−1,1)_4F) around turnover announcements are regressed on the variable GAI (i.e., general ability index) or UNWEIGHTED_GAI or NET_GAI and controls for executive, firm, and governance characteristics as well as time and industry fixed effects. The variable UNWEIGHTED_GAI is the general ability index calculated using a weight of 1 for each of the 5 index components (instead of weighted index components). The variable NET_GAI is defined as GAI minus GAI_SUCCESSOR (i.e., the GAI of the departing CEO minus the GAI of her successor). Time fixed effects correspond to decade (year) fixed effects in Panel A (Panel B). Industry fixed effects correspond to 1-digit (2-digit) SIC industries in Panel A (Panel B). All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 3 (continued)

Panel A. Sudden Executive Deaths

	Dependent Variable: CAR(−1,1) 4F					
	All Sudden Deaths	w/o CEOs	Sudden CEO Deaths			
Variables	1	2	3	4	5	6
GAI	-0.0149*	0.0009	-0.0229**	-0.0234**		
	(-1.816)	(0.108)	(-2.020)	(-2.118)		
UNWEIGHTED_GAI					-0.0032**	
					(-2.039)	
NET_GAI (= GAI – GAI_SUCCESSOR)						-0.0070**
						(-2.012)
AGE	0.0020**	0.0020	0.0019	0.0028*	0.0028*	0.0025
	(1.988)	(1.333)	(1.368)	(1.826)	(1.799)	(1.597)
CONSULT_OR_LAW_ EXPERIENCE	0.0486*	0.0173	0.0676	0.0719	0.0711	0.0274
	(1.960)	(0.545)	(1.200)	(1.513)	(1.491)	(0.664)
FOUNDER	0.0035	-0.0044	-0.0025	-0.0094	-0.0096	-0.0148
	(0.192)	(-0.123)	(-0.124)	(-0.410)	(-0.416)	(-0.644)
TENURE	0.0009	-0.0002	0.0021**	0.0013	0.0013	0.0010
	(1.279)	(-0.258)	(2.095)	(0.935)	(0.952)	(0.708)
FIRM_SIZE	0.0136***	0.0034	0.0176***	0.0208***	0.0207***	0.0179***
	(3.076)	(0.645)	(3.820)	(3.281)	(3.263)	(2.867)
MTB	-0.0031	-0.0047	0.0012	0.0002	0.0002	0.0004
	(-1.000)	(-0.886)	(0.299)	(0.038)	(0.042)	(0.088)
ROA	-0.0485	0.0576	-0.0506	-0.1450*	-0.1448*	-0.1551
	(-1.285)	(1.090)	(-1.344)	(-1.704)	(-1.696)	(-1.635)
CAPEX				0.0710	0.0691	0.0867
				(1.032)	(0.999)	(1.288)
LEVERAGE				-0.1386**	-0.1385**	-0.1426**
				(-2.258)	(-2.256)	(-2.030)
RD				-0.1539	-0.1552	-0.2451
				(-1.004)	(-1.009)	(-1.437)
BOARD_SIZE				-0.0016	-0.0016	-0.0029
				(-0.311)	(-0.317)	(-0.524)
DUALITY				0.0086	0.0084	0.0205
				(0.432)	(0.425)	(1.002)
INDEPENDENT_BOARD				-0.0137	-0.0132	-0.0152
				(-0.592)	(-0.573)	(-0.598)
PRESIDENT				0.0163	0.0171	0.0129
				(0.794)	(0.831)	(0.587)
STAGGERED_BOARD				0.0192	0.0191	0.0145
				(0.867)	(0.860)	(0.628)
SUCCESSOR_IS_FIRM_ INSIDER				0.0726**	0.0730**	0.0884***
				(2.546)	(2.568)	(2.766)
Decade fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	164	63	101	93	93	88
R^2	0.312	0.523	0.439	0.548	0.546	0.560

TABLE 3 (continued)

Panel B. Other/All Exogenous Turnovers

	Dependent Variable: CAR(−1,1)_4F							
	Other Exogenous Turnovers				All Turnovers			
Variables	1	2	3	4	5	6	7	8
GAI	-0.0049** (-1.986)	-0.0061** (-2.091)			-0.0067** (-2.290)	-0.0071** (-2.153)		
UNWEIGHTED_GAI			-0.0009** (-2.072)				-0.0012** (-2.263)	
NET_GAI				-0.0046* (-1.687)				-0.0042* (-1.963)
AGE		0.0005 (0.645)	0.0004 (0.612)	0.0005 (0.697)		0.0014** (2.034)	0.0014** (2.025)	0.0011 (1.610)
DUALITY		-0.0152 (-1.516)	-0.0154 (-1.536)	-0.0135 (-1.355)		-0.0081 (-0.875)	-0.0082 (-0.885)	-0.0056 (-0.606)
PRESIDENT		0.0067 (0.747)	0.0060 (0.675)	0.0089 (0.977)		0.0082 (0.800)	0.0077 (0.756)	0.0035 (0.323)
SUCCESSOR_IS_FIRM INSIDER		-0.0108 (-1.290)	-0.0107 (-1.271)	-0.0047 (-0.571)		0.0021 (0.214)	0.0022 (0.223)	0.0052 (0.528)
TENURE		0.0001 (0.156)	0.0001 (0.194)	0.0001 (0.228)		0.0007 (1.466)	0.0007 (1.484)	0.0006 (1.312)
CAPEX	-0.0549* (-1.932)	-0.0396 (-1.389)	-0.0414 (-1.446)	-0.0336 (-1.162)	-0.0751** (-2.572)	-0.0657** (-2.189)	-0.0672** (-2.234)	-0.0331 (-1.201)
FIRM_SIZE	0.0013 (0.472)	0.0032 (1.267)	0.0034 (1.358)	0.0032 (1.331)	0.0049** (2.240)	0.0065*** (2.860)	0.0068*** (2.952)	0.0070*** (3.127)
LEVERAGE	-0.0037 (-0.145)	0.0133 (0.493)	0.0124 (0.459)	0.0124 (0.461)	-0.0201 (-0.764)	-0.0083 (-0.318)	-0.0092 (-0.354)	-0.0105 (-0.410)
MTB	0.0034* (1.775)	0.0032* (1.728)	0.0031* (1.713)	0.0030* (1.694)	0.0020 (1.118)	0.0016 (0.881)	0.0015 (0.868)	0.0014 (0.828)
ROA	0.0043 (0.050)	0.0494 (0.641)	0.0494 (0.636)	0.0477 (0.656)	0.0792 (1.505)	0.0555 (1.121)	0.0557 (1.128)	0.0530 (1.149)
RD	-0.0402 (-0.297)	-0.0934 (-0.697)	-0.0864 (-0.643)	-0.1143 (-0.838)	0.0597 (0.559)	0.0776 (0.775)	(-2.234) 0.0818	(-1.201) 0.0390
Year fixed effects Industry fixed effects	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
No. of obs. R^2	345 0.345	310 0.432	310 0.433	296 0.248	440 0.335	405 0.406	405 0.407	385 0.380

TABLE 4

GAI Components

Table 4 reports results from OLS regressions based on the sample of sudden CEO deaths (Panel A), the sample of other exogenous CEO turnovers (Panel B), and the pooled sample of sudden CEO deaths and other exogenous turnovers (Panel C). CAR(−1,1)_4F is regressed on the GAI components, control variables, and time and industry fixed effects. The GAI components are those used in Custódio, Ferreira, and Matos (2013). NUMBER_OF_POSITIONS is the number of different positions a CEO performed, NUMBER_OF_FIRMS is the number of different firms where a CEO worked, and NUMBER_OF_INDUSTRIES is the number of different industries at the 4-digit SIC level where the CEO worked. CEO_EXPERIENCE and CONGLOMERATE_EXPERIENCE are indicator variables, which equal 1 if a CEO held the CEO position at another firm before and if a CEO worked for a multi-division conglomerate before (and 0 otherwise), respectively. The control variables used in Panel A (Panels B and C) are equal to those used in column 3 of Panel A of Table 3 (column 2 of Panel B of Table 3). All regressions include a constant (not reported). *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 4 (continued)

	Dependent Variable: CAR(−1,1)_4F				
	NUMBER_OF_ POSITIONS	NUMBER_OF_ FIRMS	NUMBER_OF_ INDUSTRIES	CEO_ EXPERIENCE	CONGLOMERATE _ EXPERIENCE
Variables	1	2	3	4	5
Panel A. Sudden Death					
GAI component	-0.0055*	-0.0108**	-0.0108*	-0.0004	0.0018
	(-1.684)	(-2.195)	(-1.854)	(-0.025)	(0.073)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes
No. of obs.	101	101	101	101	101
R^2	0.429	0.442	0.430	0.401	0.401
Panel B. Other Exogenous Turnovers					
GAI component	-0.0018	-0.0028**	-0.0032*	-0.0076	-0.0013
	(-1.637)	(-2.026)	(-1.955)	(-1.013)	(-0.131)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes
No. of obs.	310	310	310	310	310
R^2	0.431	0.432	0.431	0.427	0.424
Panel C. All Turnovers					
GAI component	-0.0026**	-0.0035**	-0.0031*	-0.0025	-0.0031
	(-2.180)	(-2.310)	(-1.695)	(-0.352)	(-0.367)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes
No. of obs.	405	405	405	405	405
R^2	0.408	0.406	0.402	0.398	0.398

TABLE 5

Alternative Explanations: Talent, Education, and Network

Table 5 reports results from OLS regressions based on the sample of sudden CEO deaths (Panel A) as well as the sample of other exogenous CEO turnovers and the combined sample including all exogenous turnovers (Panel B). CAR(−1,1)_4F is regressed on the variable GAI and controls for executive, firm, and governance characteristics, time and industry fixed effects, and additional controls for CEO talent, education, and network (i.e., FIRST_CEO_AGE, TENURE/AGE, IVY_LEAGUE, MBA). FIRST_CEO_AGE is the age at which a CEO first became CEO. TENURE/AGE is the ratio of the variables TENURE and AGE. IVY_LEAGUE and MBA are indicator variables, which equal 1 if a CEO graduated from an Ivy League school and obtained a Master of Business Administration degree (and 0 otherwise), respectively. The control variables in Panel A (Panel B) are equal to those used in columns 3 and 4 of Panel A of Table 3 (column 2 of Panel B of Table 3). All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 5 (continued)

Panel A. Sudden Deaths

	Dependent Variable: CAR(−1,1)_4F					
Variables	1	2	3	4	5	6
GAI	-0.0213**	-0.0232*	-0.0230*	-0.0217**	-0.0237**	-0.0235**
	(-2.200)	(-1.984)	(-2.000)	(-2.095)	(-2.102)	(-2.060)
FIRST_CEO_AGE	-0.0037**				-0.0030	-0.0036*
	(-2.381)				(-1.674)	(-1.955)
TENURE/AGE		-0.7638**				
		(-2.382)				
IVY_LEAGUE			0.0075		-0.0333	0.0170
			(0.355)		(-1.204)	(0.614)
MBA				-0.0273	0.0017	-0.0475
				(-1.114)	(0.079)	(-1.685)
CEO controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
Governance controls	No	No	No	No	No	Yes
Decade fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	101	101	66	66	64	60
R^2	0.489	0.476	0.504	0.523	0.306	0.717

Panel B. Other/All Exogenous CEO Turnovers

	Dependent Variable: CAR(−1,1)_4F					
	Other Exogenous Turnovers					All Turnovers
Variables	1	2	3	4	5	6
GAI	-0.0058*	-0.0061**	-0.0061**	-0.0059*	-0.0056*	-0.0058*
	(-1.947)	(-2.103)	(-2.087)	(-1.939)	(-1.813)	(-1.679)
FIRST_CEO_AGE	0.0005				0.0005	-0.0005
	(1.060)				(1.056)	(-0.720)
TENURE/AGE		-0.1124				
		(-0.420)				
IVY_LEAGUE			-0.0001		0.0006	-0.0030
			(-0.013)		(0.102)	(-0.389)
MBA				-0.0023	-0.0024	-0.0057
				(-0.274)	(-0.278)	(-0.650)
CEO controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm controls	Yes	Yes	Yes	Yes	Yes	Yes
Governance controls	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	310	310	310	310	310	370
R^2	0.434	0.433	0.432	0.433	0.434	0.387

TABLE 6

General Managerial Skills and Changes in Operating Performance

Table 6 reports results from OLS regressions of measures of operating performance (profit margin and ROA) on the variables NET_GAI and GAI_SUCCESSOR as well as control variables for the sample of sudden deaths, the sample of other exogenous turnovers, and the sample of all turnovers. The variable NET_GAI is defined as GAI minus GAI_SUCCESSOR (i.e., the GAI of the departing CEO minus the GAI of her successor). For each firm, the performance measures are adjusted for the median performance in the respective 2-digit SIC industry. The dependent variable Ø_IND_ADJ_PROFIT_MARGIN$_{t+1\,-\,t+3}$ is defined as the firm's average industry-adjusted profit margin in the 3 fiscal years after the fiscal year in which the turnover took place. The dependent variable IND_ADJ_PROFIT_MARGIN$_{t-1}$ – Ø_IND_ADJ_PROFIT_MARGIN$_{t+1\,-\,t+3}$ is defined as the firm's industry-adjusted profit margin in the fiscal year prior to the fiscal year in which the turnover took place minus the firm's average industry-adjusted profit margin in the 3 fiscal years after the fiscal year in which the turnover took place. Similar definitions apply to the ROA-based variables. The dependent variables are winsorized at the 1st and 99th percentiles. Time fixed effects correspond to decade (year) fixed effects for the sample of sudden deaths (the other samples). All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 6 (continued)

Panel A. Profit Margin

	Dependent Variables:					
	Ø_IND_ADJ_PROFIT_MARGIN$_{t+1-t+3}$			IND_ADJ_PROFIT_MARGIN$_{t-1}$ − Ø_IND_ADJ_PROFIT_MARGIN$_{t+1-t+3}$		
	Sudden Deaths	Other Exogenous Turnovers	All Turnovers	Sudden Deaths	Other Exogenous Turnovers	All Turnovers
Variables	1	2	3	4	5	6
GAI_SUCCESSOR	0.0196*	0.0187*	0.0223**			
	(1.880)	(1.890)	(2.186)			
NET_GAI				0.0013	0.0054*	0.0021
				(0.353)	(1.864)	(0.738)
CAPEX	-0.1139	-0.1360**	-0.0343	0.2012***	0.0059	0.0309
	(-0.378)	(-2.312)	(-0.404)	(2.831)	(0.174)	(0.697)
FIRM_SIZE	0.0041	-0.0015	-0.0004	0.0067	0.0060**	0.0043
	(0.397)	(-0.245)	(-0.075)	(0.820)	(2.249)	(1.328)
LEVERAGE	-0.3438**	0.1607**	-0.0507	-0.1574*	-0.0150	-0.0925*
	(-1.989)	(2.258)	(-0.477)	(-1.798)	(-0.620)	(-1.730)
MTB	0.0479***	0.0115**	0.0233***	0.0019	-0.0046**	-0.0047**
	(2.856)	(2.299)	(4.247)	(0.235)	(-2.308)	(-1.994)
ROA	0.5147	0.9798***	0.5876**	0.1251	0.1396*	0.3790***
	(1.272)	(4.481)	(2.039)	(1.247)	(1.725)	(3.510)
RD	-0.8086	1.4742***	0.3131	-1.7211**	0.0351	-0.6195
	(-0.612)	(6.079)	(0.425)	(-2.622)	(0.334)	(-1.476)
SUCCESSOR_IS_FIRM_ INSIDER	-0.0432	-0.0132	-0.0379	0.0080	-0.0164**	-0.0292*
	(-0.624)	(-0.628)	(-1.290)	(0.329)	(-1.998)	(-1.960)
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	112	286	361	111	285	360
R^2	0.324	0.296	0.271	0.538	0.092	0.420

Panel B. ROA

	Dependent Variables:					
	Ø_IND_ADJ_ROA$_{t+1-t+3}$			IND_ADJ_ROA$_{t-1}$ − Ø_IND_ADJ_ROA$_{t+1-t+3}$		
	Sudden Deaths	Other Exogenous Turnovers	All Turnovers	Sudden Deaths	Other Exogenous Turnovers	All Turnovers
Variables	1	2	3	4	5	6
GAI_SUCCESSOR	0.0008	-0.0044	-0.0037			
	(0.156)	(-0.732)	(-0.625)			
NET_GAI				-0.0036	0.0099*	-0.0004
				(-0.643)	(1.891)	(-0.074)
Controls as in Panel A	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	118	301	380	118	301	380
R^2	0.681	0.306	0.490	0.173	0.170	0.099

TABLE 7

Do Firms Replace Lost General Human Capital?

Table 7 reports results from OLS regressions of the variable GAI_SUCCESSOR (columns 1, 3, and 5) and the indicator variable GAI_SUCCESSOR_<_GAI (columns 2, 4, and 6) on GAI and CEO and firm characteristics as well as time and industry fixed effects. GAI_SUCCESSOR_<_GAI is an indicator variable, which equals 1 if the variable GAI_SUCCESSOR is smaller than the variable GAI (i.e., the general ability index of the successor is lower than that of the departing CEO). Time fixed effects correspond to decade fixed effects in columns 1 and 2 and to year fixed effects in columns 3−6. Industry fixed effects correspond to 1-digit SIC codes in columns 1 and 2 and to 2-digit SIC codes in columns 3−6. All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 7 (continued)

	Dependent Variables:					
	Sudden Deaths		Other Exogenous Turnovers		All Turnovers	
	GAI_ SUCCESSOR	GAI_ SUCCESSOR_ <_GAI	GAI_ SUCCESSOR	GAI_ SUCCESSOR_ <_GAI	GAI_ SUCCESSOR	GAI_ SUCCESSOR_ <_GAI
Variables	1	2	3	4	5	6
GAI	0.0377	0.1234***	0.1814***	0.2399***	0.1810***	0.2449***
	(0.122)	(4.706)	(3.140)	(8.647)	(3.270)	(9.861)
AGE	0.0024	-0.0005	-0.0015	0.0061	0.0037	0.0053
	(0.089)	(-0.077)	(-0.144)	(1.095)	(0.461)	(1.376)
DUALITY	-0.6454	0.2461**	-0.0377	0.0756	-0.0968	0.1135*
	(-1.136)	(2.107)	(-0.255)	(0.955)	(-0.818)	(1.767)
PRESIDENT	0.2967	-0.1788	0.0266	0.0445	0.2718*	-0.1125*
	(0.458)	(-1.620)	(0.139)	(0.518)	(1.742)	(-1.760)
SUCCESSOR_IS_FIRM_INSIDER	-1.6029**	0.0656	-0.4793***	0.1479*	-0.4914***	0.1200*
	(-2.136)	(0.540)	(-2.907)	(1.924)	(-3.399)	(1.758)
TENURE	0.0245	-0.0040	-0.0019	-0.0065*	0.0016	-0.0060**
	(0.813)	(-0.805)	(-0.294)	(-1.904)	(0.239)	(-2.026)
CAPEX	-0.4760	-0.0049	0.7571	-0.0175	0.2459	0.1025
	(-0.257)	(-0.018)	(1.532)	(-0.076)	(0.631)	(0.595)
FIRM_SIZE	0.2695**	-0.0365	0.1557***	-0.0312	0.0962***	-0.0223
	(2.151)	(-1.120)	(3.671)	(-1.431)	(3.285)	(-1.476)
LEVERAGE	-1.7522	-0.0447	-0.0814	0.2824	-0.4065	0.1582
	(-1.410)	(-0.162)	(-0.201)	(1.281)	(-1.211)	(0.891)
MTB	-0.0677	0.0238	0.0023	-0.0165	0.0000	-0.0101
	(-0.615)	(1.060)	(0.073)	(-1.166)	(0.001)	(-0.854)
ROA	-0.5347	0.0777	-0.4825	-0.1342	-0.8656	0.1623
	(-0.243)	(0.187)	(-0.327)	(-0.179)	(-1.442)	(0.591)
RD	3.4349	-0.6631	1.7979	-0.1947	0.4117	-0.1128
	(0.942)	(-0.743)	(0.919)	(-0.204)	(0.311)	(-0.186)
BOARD_SIZE	-0.0114	0.0262				
	(-0.104)	(1.136)				
FOUNDER	-0.0764	0.1252				
	(-0.123)	(0.985)				
INDEPENDENT_BOARD	0.3316	-0.0317				
	(0.508)	(-0.206)				
STAGGERED_BOARD	0.5183	-0.2156*				
	(0.916)	(-1.793)				
Time fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	88	88	296	296	385	385
R^2	0.438	0.613	0.415	0.508	0.391	0.519

TABLE 8

Abnormal Stock Returns around Successor Appointments

Table 8 reports results from OLS regressions of SUCCESSOR_CAR(−1,1)_4F (or, alternatively, SUCCESSOR_CAR(−2,2)_4F) on the variable GAI_SUCCESSOR and CEO, firm, and governance characteristics as well as time and industry fixed effects. Panel A shows results for the sample of sudden CEO deaths and Panel B shows results for the sample of other exogenous turnovers and the pooled sample of all turnovers. Time fixed effects correspond to decade fixed effects in Panel A and to year fixed effects in Panel B. Industry fixed effects correspond to 1-digit SIC codes in Panel A and to 2-digit SIC codes in Panel B. HQ urban (rural) refers to all firms (not) headquartered in one of the top 50 U.S. metropolitan areas (based on the U.S. Census). Large (small) firms are those firms with firm size above (below or equal to) the median firm size. All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 8 (continued)

Panel A. Stock Returns around Successor Appointments following Sudden CEO Deaths

	Dependent Variable: SUCCESSOR_CAR(−1,1)_4F				
		HQ Rural	HQ Urban	Small Firm	Large Firm
Variables	1	2	3	4	5
GAI_SUCCESSOR	0.0109*	0.0178**	-0.0167	0.0198*	-0.0034
	(1.687)	(2.553)	(-1.246)	(1.894)	(-0.457)
CAPEX	0.0363	0.0745	0.7939	0.0331	0.0454
	(0.646)	(0.666)	(2.542)	(0.270)	(0.346)
FIRM_SIZE	0.0014	-0.0011	0.0364	0.0164	-0.0063
	(0.185)	(-0.074)	(1.358)	(0.539)	(-0.492)
LEVERAGE	0.0437	-0.0810	0.3016	0.0662	-0.1282
	(0.623)	(-0.780)	(1.937)	(0.376)	(-1.229)
MTB	-0.0035	0.0015	-0.0682*	-0.0047	0.0099
	(-0.635)	(0.141)	(-3.232)	(-0.232)	(1.330)
ROA	-0.0351	-0.1073	-0.7997	-0.1069	-0.6667*
	(-0.277)	(-0.577)	(-1.507)	(-0.467)	(-2.110)
RD	0.0467	-0.0726	0.4125	0.0299	-0.5880
	(0.178)	(-0.194)	(1.265)	(0.073)	(-1.070)
BOARD_SIZE	-0.0016	0.0054	-0.0205*	0.0062	0.0001
	(-0.306)	(0.649)	(-4.095)	(0.519)	(0.008)
FOUNDER	0.0126	-0.0046	0.2362	0.0169	0.0199
	(0.553)	(-0.128)	(2.030)	(0.379)	(0.561)
INDEPENDENT_BOARD	-0.0086	-0.0314	-0.0912	0.0340	0.0611
	(-0.419)	(-1.192)	(-1.367)	(0.646)	(1.212)
PRESIDENT	0.0008	-0.0148	-0.0173	-0.0264	0.0125
	(0.038)	(-0.476)	(-0.127)	(-0.457)	(0.585)
STAGGERED_BOARD	-0.0183	-0.0365	0.2488	-0.1300	0.0159
	(-0.893)	(-1.124)	(2.631)	(-1.475)	(0.496)
SUCCESSOR_IS_FIRM_INSIDER	0.0518	0.0809	-0.0131	0.0049	0.0489
	(1.380)	(1.387)	(-0.101)	(0.085)	(0.943)
Decade fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes
No. of obs.	81	55	26	41	40
R^2	0.244	0.392	0.974	0.420	0.643

TABLE 8 (continued)

Panel B. Stock Returns around Successor Appointments following Other/All Exogenous CEO Turnovers

	Dependent Variables:			
	Other Exogenous Turnovers		All Turnovers	
	SUCCESSOR_ CAR(−1,1)_4F	SUCCESSOR_ CAR(−2,2)_4F	SUCCESSOR_ CAR(−1,1)_4F	SUCCESSOR_ CAR(−2,2)_4F
Variables	1	2	3	4
GAI_SUCCESSOR	-0.0021	0.0001	0.0054	0.0075**
	(-0.592)	(0.031)	(1.236)	(2.033)
CAPEX	-0.0245	-0.0007	-0.0340	-0.0330
	(-0.846)	(-0.021)	(-1.236)	(-1.148)
FIRM_SIZE	0.0032	0.0059*	-0.0009	-0.0001
	(1.311)	(1.782)	(-0.419)	(-0.052)
LEVERAGE	0.0300	0.0280	0.0258	0.0300
	(1.154)	(0.820)	(1.187)	(1.021)
MTB	0.0012	-0.0008	0.0016	0.0008
	(0.620)	(-0.334)	(0.939)	(0.398)
ROA	0.1043	0.1385	0.0444	0.0183
	(1.211)	(1.281)	(0.749)	(0.314)
RD	0.1271	-0.0516	0.1533	0.0305
	(0.935)	(-0.308)	(1.186)	(0.230)
PRESIDENT	-0.0047	-0.0046	-0.0053	-0.0064
	(-0.486)	(-0.409)	(-0.513)	(-0.606)
SUCCESSOR_IS_FIRM_INSIDER	-0.0123	-0.0100	0.0006	0.0078
	(-1.242)	(-0.860)	(0.057)	(0.674)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
No. of obs.	319	319	400	400
R^2	0.186	0.176	0.211	0.205

TABLE 9

Combined Stock Returns around CEO Turnovers and Successor Appointments

Table 9 reports results from OLS regressions of SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F), that is, the sum of the variables CAR(−1,1)_4F and SUCCESSOR_CAR(−1,1)_4F (or, alternatively, the sum of CAR(−2,2)_4F and SUCCESSOR_CAR(−2,2)_4F) on the variable NET_GAI and CEO, firm, and governance characteristics as well as time and industry fixed effects. The variable NET_GAI is defined as GAI minus GAI_SUCCESSOR (i.e., the GAI of the departing CEO minus the GAI of her successor). Panel A shows results for the sample of sudden CEO deaths and Panel B shows results for the sample of other exogenous turnovers and the pooled sample of all turnovers. Time fixed effects correspond to decade fixed effects in Panel A and to year fixed effects in Panel B. Industry fixed effects correspond to 1-digit SIC codes in Panel A and to 2-digit SIC codes in Panel B. HQ urban (rural) refers to all firms (not) headquartered in one of the top 50 U.S. metropolitan areas (based on the U.S. Census). Large (small) firms are those firms with firm size above (below or equal to) the median firm size. All regressions include a constant (not reported). The control variables in Panel A (Panel B) are identical to those in Panel A (Panel B) of Table 8. Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

TABLE 9 (continued)

Panel A. Combined Stock Returns around Sudden CEO Deaths and CEO Successor Appointments

	Dependent Variable: SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F)				
		HQ Rural	HQ Urban	Small Firm	Large Firm
Variables	1	2	3	4	5
NET_GAI	-0.0159**	-0.0254***	0.0039	-0.0353***	-0.0002
	(-2.287)	(-2.891)	(0.165)	(-3.302)	(-0.015)
Controls as in Table 8	Yes	Yes	Yes	Yes	Yes
No. of obs.	81	55	26	41	40
R^2	0.244	0.392	0.974	0.420	0.643

Panel B. Combined Stock Returns around Other/All Exogenous CEO Turnovers and Successor Appointments

	Dependent Variables:			
	Other Exogenous Turnovers		All Turnovers	
	SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F)	SUM(CAR(−2,2)_4F + SUCCESSOR_CAR(−2,2)_4F)	SUM(CAR(−1,1)_4F + SUCCESSOR_CAR(−1,1)_4F)	SUM(CAR(−2,2)_4F + SUCCESSOR_CAR(−2,2)_4F)
Variables	1	2	3	4
NET_GAI	-0.0072	-0.0105*	-0.0114***	-0.0138***
	(-1.529)	(-1.734)	(-2.747)	(-3.274)
Controls as in Table 8	Yes	Yes	Yes	Yes
No. of obs.	319	319	400	400
R^2	0.213	0.186	0.256	0.223

Appendix A. Variable Definitions

Appendix A provides an overview and detailed definitions of the variables used in this study. Accounting data refers to the previous fiscal year and is winsorized at the 5th and 95th percentiles.

Abnormal Returns

CAR(−1,1)_4F: Cumulative abnormal return (CAR) between $t-1$ and $t+1$, where t is the announcement date of the exogenous turnover (or the next trading day if the announcement took place on a non-trading day). CAR (−1,1) is estimated using the Carhart (1997) 4-factor model.

CAR(−1,1)_FF3: CAR (−1,1) is estimated using the Fama and French (1993) 3-factor model.

CAR(−1,1)_4F < 0: Dummy equaling 1 if CAR(−1,1)_4F is below 0.

SUCCESSOR_CAR(−1,1)_4F: CAR (−1,1)_4F in reaction to the appointment of a permanent successor.

Executive Characteristics

AGE: Age of the executive (in years) at the time of the exogenous turnover.

CHAIRMAN: Dummy equaling 1 if the executive was the firm's chairman, and 0 otherwise.

CONSULT_OR_LAW_ EXPERIENCE: Dummy equaling 1 if the executive had work experience with either a consulting or a law firm, and 0 otherwise.

FIRST_CEO_AGE: Age at which the departing executive first became CEO.

FOUNDER: Dummy equaling 1 if the executive was the firm's founder or the founder's offspring, and 0 otherwise.

GAI: The departing executive's general ability index, defined as in Custódio, Ferreira, and Matos (2013). Larger GAI index values indicate higher general managerial skills.

GAI_SUCCESSOR: GAI index of the departing executive's successor.

IVY_LEAGUE: Dummy equaling 1 if the executive graduated from an Ivy League school at any level, and 0 otherwise.

MBA: Dummy equaling 1 if the executive obtained a Master of Business Administration, and 0 otherwise.

NET_GAI: GAI − GAI_SUCCESSOR, that is, the GAI of the departing executive minus the GAI of his or her permanent successor.

TENURE: Tenure of the executive at the time of his or her turnover.

TENURE/AGE: The executive's tenure divided by his or her age at the time of the turnover.

UNWEIGHTED_GAI: Sum of the 5 unweighted GAI components (i.e., # management positions, # firms, # industries, CEO experience dummy, conglomerate experience dummy).

Firm Characteristics

CAPEX: Capital expenditures divided by net property, plant, and equipment (PPE) (winsorized).

FIRM_SIZE: The natural logarithm of total assets.

LEVERAGE: Short-term and long-term debt to total assets (winsorized).

MTB: Market-to-book ratio, constructed as the ratio of the market value of equity to the difference between assets and liabilities (winsorized).

ROA: Income before extraordinary items divided by total assets (winsorized).

RD: Ratio of R&D expenses to total assets (winsorized).

Governance Characteristics

BOARD_SIZE: The number of directors on the firm's board of directors.

DUALITY: Dummy equaling 1 if the CEO was also the firm's chairman of the board of directors, and 0 otherwise.

INDEPENDENT_BOARD: Dummy equaling 1 if the firm's board of directors is truly independent (i.e., the majority of directors are neither insiders nor grey directors), and 0 otherwise.

PRESIDENT: Dummy equaling 1 if the deceased executive was the firm's president, and 0 otherwise.

STAGGERED_BOARD: Dummy equaling 1 if the firm's board of directors has staggered election terms, and 0 otherwise.

SUCCESSOR_IS_FIRM INSIDER: Dummy equaling 1 if the executive's successor is a firm insider, and 0 otherwise.

Appendix B. Median Regressions for the Sample of Sudden CEO Deaths

This table reports results from median regressions based on the sample of sudden CEO deaths. CAR(−1,1)_4F is regressed on the variable GAI (columns 1 and 2) or UNWEIGHTED_GAI (column 3) or NET_GAI (column 4) and controls for executive, firm, and governance characteristics as well as decade fixed effects and industry fixed effects (based on 1-digit SIC codes). The variable UNWEIGHTED_GAI is the general ability index calculated using a weight of 1 for each of the 5 index components (instead of weighted index components). The variable NET_GAI is defined as GAI minus GAI_SUCCESSOR (i.e., the GAI of the departing CEO minus the GAI of her successor). All regressions include a constant (not reported). Variables are defined in Appendix A. *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

APPENDIX B (continued)

	Dependent Variable: CAR(−1,1)_4F			
	General Ability Measure			
	GAI	GAI	UNWEIGHTED _GAI	NET_GAI
Variables	1	2	3	4
General ability measure	-0.0313**	-0.0293**	-0.0043**	-0.0131***
	(-2.092)	(-2.123)	(-2.055)	(-2.838)
FIRST_CEO_AGE		-0.0028		
		(-1.105)		
IVY_LEAGUE		0.0069		
		(0.201)		
MBA		-0.0305		
		(-0.908)		
AGE	0.0035**	0.0036	0.0035**	0.0033**
	(2.235)	(1.183)	(2.210)	(2.247)
CONSULT_OR_LAW_EXPERIENCE	0.1075	0.0610	0.1058	-0.0126
	(1.194)	(0.891)	(1.171)	(-0.119)
FOUNDER	-0.0257	-0.0311	-0.0263	-0.0248
	(-0.786)	(-1.004)	(-0.801)	(-0.804)
TENURE	0.0012	-0.0002	0.0013	0.0005
	(0.872)	(-0.066)	(0.910)	(0.414)
FIRM_SIZE	0.0217**	0.0215**	0.0221**	0.0111
	(2.600)	(2.701)	(2.638)	(1.522)
MTB	-0.0007	0.0019	-0.0007	0.0044
	(-0.110)	(0.246)	(-0.108)	(0.721)
ROA	-0.1162	-0.1372	-0.1187	-0.0378
	(-0.914)	(-0.780)	(-0.931)	(-0.310)
CAPEX	0.1006	0.1331	0.1032	0.1309
	(1.149)	(1.616)	(1.177)	(1.637)
LEVERAGE	-0.0708	-0.0267	-0.0684	-0.0898
	(-0.947)	(-0.420)	(-0.911)	(-1.284)
RD	-0.0099	-0.0074	-0.0055	-0.0785
	(-0.041)	(-0.024)	(-0.023)	(-0.339)
BOARD_SIZE	0.0003	-0.0015	0.0003	0.0028
	(0.053)	(-0.260)	(0.053)	(0.497)
DUALITY	-0.0145	-0.0174	-0.0144	-0.0010
	(-0.460)	(-0.612)	(-0.453)	(-0.033)
INDEPENDENT_BOARD	-0.0044	0.0028	-0.0033	-0.0094
	(-0.145)	(0.103)	(-0.109)	(-0.325)
PRESIDENT	0.0007	0.0094	0.0021	0.0003
	(0.027)	(0.389)	(0.082)	(0.011)
STAGGERED_BOARD	-0.0013	-0.0033	-0.0009	0.0171
	(-0.044)	(-0.109)	(-0.031)	(0.622)
SUCCESSOR_IS_FIRM_INSIDER	0.0562	0.0816*	0.0578	0.0562
	(1.403)	(1.915)	(1.439)	(1.553)
Decade fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
No. of obs.	93	60	93	88
Pseudo R^2	0.287	0.448	0.283	0.336

Appendix C. Alternative Event Windows and Measures of Abnormal Returns

This table reports results from OLS regressions of various measures of cumulative abnormal returns (CARs) around sudden CEO deaths (Panel A), other exogenous CEO turnovers (Panel B), and all CEO turnovers (Panel C) on the variable GAI and control variables. The control variables in Panel A (Panels B and C) are similar to those in column 4 of Panel A of Table 3 (column 2 of Panel B of Table 3). *t*-statistics (in parentheses) are estimated using robust standard errors. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variables:						
	CAR(−2,2) _4F	CAR(−3,3) _4F	CAR(−1,20) _4F	CAR(−20, −2) _4F	CAR(−1,1)_4F winsorized (5th/95th)	CAR(−1,1)_4F_ <_0 (dummy)	CAR(−1,1) _FF3
	1	2	3	4	5	6	7
Panel A. Sudden CEO Deaths							
GAI	-0.0247**	-0.0281*	-0.0418*	-0.0069	-0.0184**	0.1089*	-0.0228**
	(-2.003)	(-1.918)	(-1.731)	(-0.372)	(-2.357)	(1.738)	(-2.059)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	93	93	93	93	93	93	93
R^2	0.518	0.403	0.463	0.365	0.551	0.388	0.549
Panel B. Other Exogenous Turnovers							
GAI	-0.0073*	-0.0103**	-0.0188***	-0.0012	-0.0062**	0.0694**	-0.0063**
	(-1.874)	(-2.323)	(-2.750)	(-0.168)	(-2.442)	(2.022)	(-1.979)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	310	310	310	310	310	310	310
R^2	0.388	0.265	0.427	0.241	0.267	0.259	0.386
Panel C. All Turnovers							
GAI	-0.0100**	-0.0124***	-0.0182**	-0.0129*	-0.0067**	0.0716**	-0.0071**
	(-2.451)	(-2.783)	(-2.346)	(-1.776)	(-2.430)	(2.227)	(-2.028)
Controls as in Table 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
No. of obs.	405	405	405	405	405	405	405
R^2	0.354	0.282	0.357	0.253	0.324	0.253	0.388

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