

Betzer, André; Ibel, Maximilian; Lee, Hye Seung; Limbach, Peter; Salas, Jesus M.

**Working Paper**

## Are generalists beneficial to corporate shareholders? Evidence from sudden deaths

CFR Working Paper, No. 16-12

**Provided in Cooperation with:**

Centre for Financial Research (CFR), University of Cologne

*Suggested Citation:* Betzer, André; Ibel, Maximilian; Lee, Hye Seung; Limbach, Peter; Salas, Jesus M. (2016) : Are generalists beneficial to corporate shareholders? Evidence from sudden deaths, CFR Working Paper, No. 16-12, University of Cologne, Centre for Financial Research (CFR), Cologne

This Version is available at:

<https://hdl.handle.net/10419/148428>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

**CFR working paper NO. 16-12**

**are generalists beneficial to  
corporate shareholders?  
evidence from sudden deaths**

**A. Betzer • M. Ibel  
• H.S. Lee • P. Limbach • J.S. Salas**

**centre for financial research**  
Look deeper

# Are Generalists Beneficial to Corporate Shareholders? Evidence from Sudden Deaths<sup>†</sup>

André Betzer, Maximilian Ibel, Hye Seung (Grace) Lee,  
Peter Limbach, and Jesus M. Salas

## Abstract

This study documents a positive, economically meaningful impact of executives' general managerial skills on shareholder value. Examining 171 sudden executive deaths over thirty years, we find that a one-standard-deviation increase in the general ability index corresponds to at least a 1.5 percentage point decrease in abnormal stock returns to death announcements. Generalists are found to be significantly more valuable for firms with fewer growth prospects where difficult tasks (e.g., restructurings) need to be performed and adaptations to changing business environments become necessary. Our results provide a market-based explanation for the documented generalist hiring premium and the increasing share of generalists.

JEL: G30, G34, J24

Keywords: executive heterogeneity, managerial work experience, firm value

---

<sup>†</sup> We thank Tim Quigley for graciously sharing his CEO sudden deaths data. We further thank Irem Demirci, Daniel Metzger, Martin Ruckes, Markus Schmid, Meik Scholz, Florian Sonnenburg, Daniel Urban as well as seminar participants at Lehigh University, participants at the 22<sup>nd</sup> Annual Meeting of the German Finance Association in Leipzig and participants at the 19<sup>th</sup> Conference of the Swiss Society for Financial Market Research in Zurich for very helpful comments.

Betzer and Ibel are from the Schumpeter School of Business and Economics at the University of Wuppertal, Gaußstr. 20, 42119 Wuppertal, Germany (email: [betzer@wiwi.uni-wuppertal.de](mailto:betzer@wiwi.uni-wuppertal.de) and [ibelmaximilian@googlemail.com](mailto:ibelmaximilian@googlemail.com), phone: +49 (0)202 439 2905), Lee is from Fordham University, 45 Columbus Avenue, Room 612, New York, NY, 10023, United States (email: [hlee126@fordham.edu](mailto:hlee126@fordham.edu)), Limbach is from the University of Cologne and the Centre for Financial Research (CFR), Albertus-Magnus-Platz, 50923 Cologne, Germany (email: [plimbach@wiso.uni-koeln.de](mailto:plimbach@wiso.uni-koeln.de), phone: +49 (0)221 470 6966), and Salas is from the College of Business at Lehigh University, 621 Taylor St, RBC 448, Bethlehem, PA, 18015, United States (email: [jsalas@lehigh.edu](mailto:jsalas@lehigh.edu), phone: +1 610 758 3238).

## 1. Introduction

Much attention has been paid to corporate executives, particularly CEOs, given their impact on firm policies and performance (e.g., Bertrand and Schoar, 2003; Adams, Almeida, and Ferreira, 2005). Recently, the question which skills and traits enable executives to successfully manage their firms and whether these skills and traits explain differences in executive pay has drawn particular attention (see, e.g., Chang, Dasgupta, and Hilary, 2010; Falato, Li, and Milbourn, 2015; Graham, Harvey, and Puri, 2013, 2016).

Among executives, generalists – who possess broad managerial work experience – have been shown to account for a growing share of management and to receive significant hiring and pay premia (Custódio, Ferreira, and Matos, 2013), presumably due to an increasing demand for general managerial ability (Murphy and Zbojnik, 2004). These trends indicate that generalist executives are important to modern corporations and that they can be expected to benefit corporate shareholders.<sup>1</sup> Against this background, we test the hypothesis that executives' general managerial ability has a positive impact on shareholder value.

We find strong support for our hypothesis using a sample of 171 sudden executive (CEOs, chairmen, and presidents) deaths. The stock price reaction to announcements of these deaths equals a deceased executive's expected contribution to shareholder value net of the expected replacement. Thus, the approach allows to measure the value of general managerial skills as long as they are costly (difficult) to replace. This assumption appears reasonable given the increasing

---

<sup>1</sup> This expectation is based on the theoretical assumption of a competitive assignment of executives to firms (see, e.g., Eisfeldt and Kuhnen, 2013, Gabaix and Landier, 2008; Terviö, 2008) which suggests that executives with general managerial skills receive a hiring premium because these skills are expected to have a positive effect on firm value. Anecdotal evidence supports the view that generalists are valuable and have become increasingly important. 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”.

demand for generalists and the hiring premium they receive, consistent with the increasing competition for managerial talent (see, e.g., Frydman, 2014, Terviö, 2008). As sudden deaths occur randomly, the approach mitigates endogeneity concerns. It particularly addresses the endogenous executive-firm match which typically distorts inferences about the value of executives.

Regarding the value and growing importance of generalists for modern corporations, several studies (e.g., Murphy and Zabochnik, 2004, 2007; Bertrand, 2009; Ferreira and Sah, 2012) propose that the need for executives with general managerial ability has increased due to severe organizational and technological changes and growing competition. Specifically, while firms have become more complex (Garicano and Rossi-Hansberg, 2006), their organizational structures have considerably flattened (Rajan and Wulf, 2006; Guadalupe, Li, and Wulf, 2014). This has led to more problem solving at the top, more interactions of executives with people inside and outside the firm, and to a higher impact of corporate leaders on firm value. As a consequence, work experience in different industries, firms and positions, including knowledge of accounting, finance, investor relations, marketing and sales, has become increasingly important. The incorporation of computers and the internet into everyday business has augmented this 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 (Rajan and Wulf, 2006; Garicano, 2000). Furthermore, Custódio, Ferreira, and Matos (2015) provide recent evidence that firms managed by generalists are more innovative (i.e., produce more cited patents). In all, based on the literature generalists can be expected to have a positive impact on shareholder value.

Consistent with this expectation, we find that the stock market attributes a significantly higher contribution to shareholder value to deceased executives with more general managerial skills as reflected by a larger stock price decline around announcements of sudden executive deaths. In

particular, we find that a one-standard-deviation increase in the general ability index proposed, by Custódio, Ferreira, and Matos (2013), is associated with an economically meaningful and statistically significant average decrease in abnormal stock returns of at least 1.5 percentage points.<sup>2</sup> This result is robust to controls for executive, firm and governance characteristics and does not hinge on how we calculate abnormal stock returns or the managerial ability index.

Although our approach mitigates endogeneity concerns, we perform a large set of additional tests to validate our results. First, we separately analyze the components of the general ability index. The results complement our findings as they suggest which type of managerial work experience shareholders consider to be particularly valuable (and costly to replace). We find that work experience in different positions, firms and industries have a statistically significant, negative effect on abnormal stock returns to sudden executive deaths. Among these components, industry experience is found to have the largest economic effect. This analysis provides further support for our hypothesis that generalists are beneficial to corporate shareholders.

Second, an important concern in the context of our study is that our results are driven by outliers given that the number of sudden executive deaths is limited, while the stock market reaction to these events is typically volatile with large negative and large positive stock returns (see Nguyen and Nielsen, 2014). We address this concern in two ways. First, we perform median regressions which minimize the sum of absolute (instead of squared) residuals. Further, we reestimate our regressions and simultaneously exclude outliers in the managerial ability index and outliers in abnormal stock returns. Both tests confirm our previous results. Moreover, when

---

<sup>2</sup> Most of our analyses focus on deceased CEOs and deceased presidents (i.e., the designated CEOs or “heir apparents”, see Adams, Almeida, and Ferreira, 2005) who are most likely to need general managerial skills in their day-to-day work life. Results remain qualitatively similar, but smaller in terms of economic magnitude, when we include deceased chairmen who were neither CEOs nor presidents. We find no statistically significant effect of general managerial skills for these chairmen.

we standardize abnormal stock returns with their pre-event volatility, our results remain qualitatively similar.

Third, another important concern is that the effect of general managerial skills actually is the outcome of alternative explanations. For example, the managerial ability index might capture executives' innate talent, which could be both costly to replace and beneficial for shareholders, and which might thus explain the negative stock market reaction to unexpected deaths of generalists. To address this concern, we use several established measures of executive talent as additional control variables. Specifically, we use an executive's education and age of first appointment to CEO (similar to Custódio, Ferreira, and Matos, 2013) as well as the ratio of an executive's tenure to her age (as in Bhagat and Bolton, 2013). Another explanation for our results is that general managerial ability correlates with executives' valuable networks which are lost when executives die. Thus, we use an executive's number of outside directorships and an indicator whether she attended an elite (Ivy League) school to control for networks valuable to corporate shareholders. We further control for time and industry effects which might drive our results. None of the aforementioned alternative explanations seem to explain our finding of a positive impact of general managerial skills on shareholder value.

We perform several additional robustness tests to validate our findings. Particularly, we exclude small and young firms, which tend to be less able to attract corporate talent, from our sample to address the concern that our results might be driven by firms that find it hard to replace valuable executives. We also restrict our sample to those firms that replace a suddenly deceased executive from inside the firm. These cases account for more than 80% of all sudden death events, consistent with the high fraction of inside CEO replacements documented in the literature (see, e.g., Bebchuk, Cremers, and Peyer, 2011). Further, we exclude cases of sudden deaths for which the cause of death is a heart attack or is unspecified as these cases might be related to firm

performance. Finally, we use additional controls for executive (inside) succession and ownership, firm diversification, leverage and R&D expenses. The positive impact of general managerial skills on shareholder value is robust to all of the aforementioned tests.

In an additional analysis, we attempt to provide some insights with regard to the question for which firms generalist executives are particularly valuable. Custódio, Ferreira, and Matos (2013) find that the generalist pay premium is higher when CEOs are hired to perform difficult corporate tasks (e.g., restructurings) which necessitate adapting to changing business environments, coordinating with several people inside and outside the firm, and seeking new investments. This finding indicates that generalists can be expected to be particularly valuable in difficult situations, for example, because their broad managerial experience is likely to facilitate communication, learning, identifying new growth prospects and adapting to changing environments (as found in Guay, Taylor, and Xiao, 2014). We thus hypothesize that the value of executives' general managerial skills is higher when firms have fewer growth prospects and, consequently, are more likely to be in need to perform difficult tasks, identify new investments, and adapt to changes. Using several measures of firms' growth opportunities, we find strong support for our hypothesis. The lower firms' growth prospects, and hence the more likely the need to perform difficult tasks, the more valuable are generalists to corporate shareholders.

Our study contributes to the literature in at least two ways. First, the insights we present in this paper extend the recent literature concerned with the role of managerial work experience in corporate finance (e.g., Benmelech and Frydman, 2015; Custódio and Metzger, 2013, 2014; Dittmar and Duchin, 2015; Schoar and Zuo, 2016), particularly the literature on general managerial skills. In this regard, our results provide a market-based explanation for Custódio, Ferreira, and Matos' (2013) finding that generalist CEOs receive considerable hiring and pay premia (19% relative to specialists). Specifically, our evidence that executives' general



managerial skills, which are transferable across companies, are associated with higher shareholder value can explain why firms seem to compete for generalists in the executive labor market (e.g., in a competitive assignment framework) and why they are willing to pay a hiring premium to attract these valuable executives. In terms of the value of generalists, Custódio, Ferreira, and Matos (2013) cannot detect a relation between their general ability index and performance in multivariate regressions. However, the authors remark that both firm performance and the CEO-firm match can be endogenous and that their tests may lack power. The problem of endogeneity in research on board structures and firm performance has been highlighted in the literature (see, e.g., Adams, Hermalin, and Weisbach, 2010). Our study attempts to overcome these problems by using sudden deaths as shocks that exogenously alter executives' general managerial skills in affected firms.

Second, the evidence we provide generally contributes to the literature on CEO heterogeneity and its relation to firm performance and shareholder value (e.g., Bennedsen, Pérez-González, and Wolfenzon, 2010, 2012; Fee, Hadlock, and Pierce, 2013; Jenter, Matveyev, and Roth, 2016; Johnson et al., 1985; Nguyen and Nielsen, 2014; Salas, 2010). Our findings indicate that generalist executives are beneficial to corporate shareholders and the value of generalists varies with firms' growth prospects. Our study, hence, has practical implications as it suggests that corporate boards and executive search firms should take general managerial skills and prevailing economic circumstances into account when they seek new executives or plan executive succession.

The remainder of this paper is organized as follows. We describe our sample and data in Section 2. Section 3 presents our main empirical results, while Section 4 provides various additional robustness tests. In Section 5, we analyze how generalists matter when firms have to perform difficult tasks. Conclusions follow.

## 2. Data and variables

### 2.1. Sample selection and data

To compile our sample of sudden executive (CEOs, chairmen and presidents) deaths for the period 1980 to 2012, we use the data from Salas (2010), who identifies suddenly deceased CEOs, chairmen and presidents, and complement it with data on sudden CEO deaths from Quigley, Crossland, and Campbell (2016). The sample period in the two aforementioned studies ends in 2008 and 2009, respectively. Thus, for the years 2009 to 2012, we additionally hand-collect data on sudden executive deaths to increase sample size. We follow the existing literature (e.g., Johnson et al., 1985; Slovin and Sushka, 1993; Salas, 2010; Nguyen and Nielsen, 2014) in terms of sample selection criteria. We search major news sources – in particular Google, LexisNexis, the Wall Street Journal, the New York Times, and the Washington Post – for articles disclosing unexpected deaths of CEOs, presidents and chairmen of the board. 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 murders and suicides (which might be related to firm performance) and cases of deaths if they cannot be identified as sudden or unexpected.<sup>3</sup>

*Figure 1* shows the distribution of causes of sudden deaths in our sample. 47% of all deaths are due to heart attacks, 28% are due to accidents and strokes, and the remaining 25% are cases of unspecified, but sudden and unexpected deaths. These numbers are almost identical to those reported in Nguyen and Nielsen (2014).

Because we examine the stock price reaction to the 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 further require data on executives’ work experience (to measure

---

<sup>3</sup> For a more detailed description of the sample selection process, we refer the reader to Salas (2010).

general managerial skills). Our final sample consists of 171 sudden executive deaths with available data on stock prices and executives' work experience. Deceased CEOs or presidents account for 134 (or 78%) of the deaths in our sample. *Appendix A* shows the distribution of sudden deaths over the sample period. 25% of all sudden deaths occurred during the 1980s, almost 39% during the 1990s, and the remaining 36% occurred between 2000 and 2012.

We complement our sample with accounting data (for the previous fiscal year) from Compustat as well as data on corporate governance and executives' characteristics and work experience. This data comes from proxy statements (in microfiche format for early years, if available), executive biographies from Capital IQ, LexisNexis as well as obituaries and other media announcements around sudden deaths.<sup>4</sup> Unfortunately, we are not able to gather all relevant data for all firms in our sample. Accordingly, multivariate regression results are based on fewer observations.

## 2.2. Measuring general managerial skills

To measure general managerial skills, we use the general ability index (GAI) proposed by Custódio, Ferreira, and Matos (2013). We follow the authors and calculate the variable *GAI index* based on equation (1):

$$GAI\ index_i = 0.268 X1_i + 0.312 X2_i + 0.309 X3_i + 0.218 X4_i + 0.153 X5_i \quad (1)$$

where *i* stands for the deceased executive *i*, *X1* is the number of positions that the deceased has held (until the year of his or her death); *X2* is the number of firms where the deceased has

---

<sup>4</sup> To facilitate the collection of executive data (particularly data on work experience), we partly automatized the data collection process using a web crawler for Google and 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 SEC filing. If the DEF 14A was not available on page 1 of the Google results, we simply 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 EDGAR. In case no relevant results turned up, we crawled results of the executives together with the keywords "death", "dies" and "died". In several cases, press releases and obituaries provided the necessary information. We opened all results and again searched automatically for the keywords. After filtering irrelevant results, we browsed each document manually to obtain the data needed to construct the general ability index.

worked; X3 is the number of industries in which the deceased has worked; X4 is a dummy variable equal to one if the deceased held a CEO position in another firm (zero otherwise); and X5 is a dummy variable equal to one if the deceased has worked in a multi-division conglomerate (zero otherwise). The variable *GAI index* is only constructed if data on executives' work experience is available. Larger *GAI index* values correspond to more general managerial skills. We standardize *GAI index* to have a mean of zero and a standard deviation of one (to facilitate the interpretation of our results).

For robustness purposes, we use three alternative measures of the GAI index. First, we use an indicator variable *Generalist*, which equals one if the GAI index of an executive is larger than the median of the variable *GAI index*. Second, we use the variable *GAI unweighted* which is the unweighted GAI index defined as the sum of the unweighted components of the GAI index as shown in equation (1). It is used to address the concern that the weights proposed by Custódio, Ferreira, and Matos (2013), which are derived from a principal components analysis, might not be appropriate in the context of our study. As a third variable, we use *Residual GAI index* which is the residual from a regression of *GAI index* on the following executive characteristics which tend to correlate with the GAI index: age, CEO status, founder status, tenure, and a dummy indicating whether the executive had work experience with either a consulting or a law firm.

### **2.3. Event study methodology and abnormal stock returns**

To calculate abnormal stock returns, we obtain daily stock return data from CRSP for each of our 171 events for a 255-day pre-event estimation period (from trading day -274 to -20). We use the standard event study methodology with i) a single-factor (market model), ii) a three-factor model, and iii) a four-factor model and the value-weighted CRSP index as the market index, where beta is estimated using data from the pre-event window. We define the event date as the trading day on which the announcement of an executive's unexpected death first became public

information, i.e., the day of the first public news of the sudden death. 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 sudden death.

As our main dependent variable, we use the cumulative abnormal return for the three days surrounding the event date (i.e., from  $t - 1$  to  $t + 1$ , with  $t$  indicating the event date), denoted  $CAR(-1,1)$ , similar to Nguyen and Nielsen (2014). Specifically, we use the variables  $CAR(-1,1)_{FF3}$  and  $CAR(-1,1)_{MM}$ , where FF3 and MM indicate that the three-factor model (Fama and French, 1993) and the market model were used to calculate abnormal returns, respectively. For robustness purposes, we use three alternative measures of the stock market reaction to sudden deaths.  $CAR(-1,1)_{4F}$ , i.e., the four-factor model abnormal return (Carhart, 1997),  $SCAR(-1,1)$ , which is defined as  $CAR(-1,1)_{MM}$  divided by a firm's standard deviation of abnormal stock returns from the estimation window, and  $CAR(-1,1)_{MM} < 0$  (*dummy*), which is a dummy variable set to one if  $CAR(-1,1)_{MM}$  is below zero.

#### **2.4. Summary statistics**

Summary statistics of our sample are presented in *Table 1*. While Panel A presents summary statistics for all observations, Panel B is restricted to sudden deaths of CEOs and presidents, i.e., chairmen who are neither CEOs nor presidents are excluded. We focus on the summary statistics for the sample in Panel B, which is used in the majority of our later analyses. The numbers, however, are comparable across the two samples. All variables discussed in the following are defined in *Appendix B*.

We start with the stock price reaction to sudden deaths of CEOs or presidents. Average and median abnormal returns are found to be negative, close to zero, and volatile. Median (mean)  $CAR(-1,1)_{FF3}$  is -0.5% (-0.4%), with a standard deviation of 10%. While some sudden deaths are associated with large declines in stock prices (as suggested by the 25<sup>th</sup> percentile which

amounts to -4.2%), others are associated with large increases (the 75<sup>th</sup> percentile is +2.6%). Abnormal returns calculated with the single-factor or four-factor model reveal a similar picture. This heterogeneity of abnormal stock returns is consistent with the literature (see Johnson et al., 1985; Nguyen and Nielsen, 2014; Jenter, Matveyev, and Roth, 2016) and suggests that executive characteristics as well as labor market and corporate governance frictions (consistent with increasing stock prices) have potential explanatory power for the stock price reaction to sudden executive deaths.

With regard to the characteristics of suddenly deceased CEOs and presidents, Panel B of Table 1 reports a median general ability index (*GAI index*) of -0.16. Custódio, Ferreira, and Matos (2013) report a median GAI index of -0.18. The small difference to the median we report for our sample can be explained by the authors' focus on later years (their sample starts in 1993) and on companies covered by BoardEx. Median (mean) executive age is 60 (59) years. 80% of the suddenly deceased executives are CEOs and 4% have work experience with a consulting or law firm. 29% of the executives are the founders of our sample firms or the founder's offspring, consistent with Johnson et al. (1985) who report a fraction of 28%. Median (mean) tenure is 10 (13) years. 88% (86%) of deceased executives (CEOs) are permanently replaced by firm insiders as suggested by the variable *Successor is firm insider*.<sup>5</sup> The high fraction of CEO successions from inside the firm is consistent with the literature. Bebchuk, Cremers, and Peyer (2011), for example, report that about 15% of CEOs are replaced by firm outsiders, while Borokhovich, Parrino, and Trapani (1996) report a fraction of 19%.

Turning to firm and corporate governance characteristics, the average firm in our sample went public 21 years prior to the sudden death event (based on the CRSP inclusion date), has a

---

<sup>5</sup> 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 to make sure the replacement was not simply an interim successor while the firm continued to search for another more permanent replacement.

firm size in terms of total assets of \$2,518 million (median \$220 million), and a market-to-book ratio of 2.4. Return on assets, defined as income before extraordinary items to total assets, has a mean (median) of -3% (4%). Mean (median) ROA based on EBITDA is 4% (10%) (not reported for brevity). On average, board size is 8.5 directors, with 45% of the directors being neither insiders nor grey directors (63% post SOX). 36% of all firms have boards with staggered election terms and 69% of all CEOs also hold the title of the chairman of the board (*Duality*).

## **2.5. Determinants and development of the GAI index**

We now present a more detailed analysis of the GAI index to provide the reader with a better understanding of our measure of general managerial skills. We first consider the development of general managerial skills over time. As can be seen from *Figure 2*, we find an increasing trend of the mean GAI index per year over our sample period 1980-2012. This result supports Custódio, Ferreira, and Matos (2013), who also report an increase of the GAI index over time, and Murphy and Zbojnik (2004, 2007) who state that the demand for general managerial skills has increased over the last decades.

Next, we analyze the determinants of the GAI index. *Table 2* shows the results of multivariate regressions of the variable *GAI index* on the variables *Age* and *Tenure* in regression specification (1). Specification (2) uses *Age*, *CEO*, *Consult or Law Exp.* and *Founder* as independent variables. In specification (3), we repeat the regression from specification (2) and additionally include *Tenure*. Specification (4) further includes the variables *Board size*, *Duality*, *Independent board* and *Staggered board* as controls for corporate governance quality and CEO power. Finally, specifications (5) and (6) use *GAI unweighted* and *Generalist* as dependent variables, respectively.

Consistent with the way the GAI index is constructed and with the results in Custódio, Ferreira, and Matos (2013), we find a significantly positive (negative) relation between an executive's age (tenure) and the variable *GAI index*. In specification (2), where we omit the

variable *Tenure*, we also find that founders (or their offspring) are associated with lower GAI index values, as expected. Further, both CEOs (as compared to other executives) and executives with prior work experience in consulting or law firms are associated with significantly higher *GAI* values. The latter result is in line with the career paths of many consultants and business lawyers who, after some years on the job, start working for one of their previous clients. Regarding firm and governance characteristics, our results provide some evidence that executives with higher general managerial skills are (weakly) associated with larger, less profitable, and better governed firms.

### **3. General managerial skills and shareholder value**

In this section, we examine the impact of general managerial skills on shareholder value. We regress measures of the abnormal stock price reaction to announcements of sudden deaths, i.e.,  $CAR(-1,1)_{MM}$  and  $CAR(-1,1)_{FF3}$ , on measures of general managerial skills (the *GAI* index and its components) and additional control variables. We hypothesize that executives' general managerial skills have a positive effect on shareholder value as they facilitate management and leadership. If general managerial skills are indeed beneficial for shareholders, we expect to find a statistically significant, negative regression coefficient of the variable *GAI index*, which reflects a reduction in shareholder value resulting from the unexpected loss of an executive with valuable and costly-to-replace skills.

#### **3.1. General ability index**

In *Table 3* we present a first attempt to test the above hypothesis. We regress abnormal stock returns on *Firm size* and either the *GAI index* (in Panel A and C) or the indicator variable *Generalist* (in Panel B). We run these regressions using the sample of all deceased executives and subsamples of i) CEOs and presidents, ii) CEOs, and iii) chairmen who were neither CEOs nor



presidents.<sup>6</sup> We control for firm size to take into account that the loss of corporate talent likely has a stronger impact on stock prices of smaller companies as they may find it harder to attract new (skilled) executives.

Supporting our hypothesis, the coefficients of both *GAI index* and *Generalist* have the expected negative sign and are statistically significant (at least at the 10% level) throughout all regression specifications, except for the subsamples of chairmen. This finding suggests that general managerial skills are particularly valuable for CEOs and presidents who need these skills in their day-to-day business and who have a more direct impact on shareholder value than chairmen. Accordingly, we focus on CEOs and presidents in most of the following analyses. The results in Table 3 further suggest that the effect of general managerial skills on shareholder value is economically meaningful and is strongest for CEOs, who have the most direct impact on firms. Particularly, a one-standard-deviation increase in the *GAI index* is associated with an average decline in abnormal stock returns of about 1.1 percentage points for the full sample, whereas the stock price decline amounts to at least 1.7 percentage points for CEOs.

As a next step, we incorporate additional executive, firm, and corporate governance characteristics into our analyses to account for potential covariates of our measures of general managerial skills. The results presented in Section 2.5 suggest that the general ability index particularly correlates with executive characteristics, such as age and tenure, which are likely to affect how the stock market reacts to an executive's unexpected death (see, e.g., Jenter, Matveyev, and Roth, 2016). Not accounting for value-relevant covariates of the *GAI index* may thus lead us to draw biased or even wrong inferences about both the statistical and economic significance of

---

<sup>6</sup> We initially include chairmen who are neither CEOs nor presidents for two reasons. First, chairmen with general managerial skills could benefit shareholders as they may provide valuable advice and monitoring due to their diverse backgrounds in managerial work experience and as they may step in as CEOs when incumbent CEOs leave the firm. The second reason is that many studies on sudden executive deaths include chairmen (see, e.g., Worrell et al., 1986; Borokhovich et al., 2006; Salas, 2010; Nguyen and Nielsen, 2014).

general managerial skills. Consequently, in *Table 4* we show results from regressions of *CAR (-1,1)\_FF3* on measures of general managerial skills and the variables *Age*, *CEO*, *Consult or Law Exp.*, *Founder*, *Tenure*, *Firm size*, *MTB*, and *ROA*. Regression specifications (1) and (2) omit the variable *Tenure* due to its high correlation with *Age* and *Founder*. Specification (7) additionally includes the variables *Board size*, *Duality*, *Independent board* and *Staggered board* to account for corporate governance quality.

As can be seen from *Table 4*, the results of all seven regressions corroborate our hypothesis that executives' general managerial skills have a positive impact on shareholder value. This conclusion is supported by all four measures of general managerial ability, i.e., our primary measure *GAI index*, used in regression specifications (1), (2), (3) and (7), *Generalist* (in specification 4), *GAI unweighted* (in specification 5), and the variable *Residual GAI index* (in specification 6) which takes the value effects of executive characteristics into account. The regression coefficients of all general ability measures are significant at the 5% level or better. Accounting for additional control variables, a one-standard-deviation increase in the *GAI index* is associated with an average decline in abnormal stock returns of at least 1.9 percentage points for the sample of CEOs and presidents. Results remain significant, both statistically and economically, when we use the full sample or the sample of CEOs in unreported regressions.

In terms of the employed control variables, we find that the regression coefficients of *Age*, *Consult or Law Exp.* and *Firm size* are significantly positive, while the *intercept* is significantly negative. The positive coefficient for *Firm size* is consistent with larger firms finding it less difficult to hire a qualified successor for the suddenly deceased executive (as argued earlier), while the positive coefficient for *Age* may reflect that firms run by older executives are more likely to have succession plans in place (age itself should have little impact as it is replaceable at no or low costs). Further, the positive coefficient for *Consult or Law Exp.* either suggests that

executives who are former consultants or lawyers are associated with shareholder value destruction or it is simply the outcome of a few outliers. Corporate governance characteristics are not found to have considerable explanatory power for abnormal stock returns (similar to Nguyen and Nielsen, 2014).

Our results further indicate that general managerial ability is not only an economically meaningful, but also a statistically meaningful explainer of abnormal stock returns to sudden executive deaths. For example, the inclusion of the variable *GAI index* leads to a relative increase in adjusted R-squared of 23% and 15% when we compare regression specifications (1) and (2) in Panel A and in Panel C of Table 3, respectively. Regarding Table 4 where we account for covariates of the GAI index, the relative increase in the adjusted R-squared for specification (1), which uses the full sample, estimated with and without the *GAI index* amounts to 9%, while it amounts to 15% for specification (2) which is based on the restricted sample of CEOs and presidents (not reported for brevity).

Overall, the analyses shown in this section suggest that generalist executives are beneficial for corporate shareholders and that the effect of general managerial skills on shareholder value is both economically and statistically meaningful.

### **3.2. GAI index components**

We complement our results on the value of executives' general managerial skills by a separate examination of the components of the general ability index (described in Section 2.2). To this end, we reestimate regression specification (3) of Table 4 and use the following five variables instead of the GAI index: (1) *Number of positions*, (2) *Number of firms*, (3) *Number of industries*, (4) *CEO experience*, (5) *Conglomerate experience*. The regression results are shown in Table 5. In Panel A we use *CAR (-1,1)\_MM* as the dependent variable and in Panel B we use

*CAR (-1,1)\_FF3*. Results provide evidence on the question which GAI index components are particularly valuable and constitute a first robustness test for our main results from Section 3.1.

We find that the regression coefficients for all five index components are negative, as expected. The coefficients for *Number of positions*, *Number of firms* and *Number of industries* are also statistically significant (at the 10% level or better) in both panels. In unreported regressions, we find comparable results when we use three dummy variables indicating whether a deceased executive had work experience in different positions, firms and industries, respectively. We further find the coefficient for *CEO experience* to be significant at the 10% level in Panel B. While past work experience with different firms (*Number of firms*) is the statistically most significant effect, industry experience (*Number of industries*) is the economically most significant effect. Overall, the finding that at least three of the five index components are statistically significant and that all regression coefficients have the expected sign corroborates our results from the previous section and thereby provides additional support for our hypothesis that general managerial skills have a positive impact on shareholder value.

#### **4. Robustness**

Although an examination of the stock market reaction to sudden executive deaths mitigates endogeneity concerns already to a large extent, in this section we perform several additional tests to check the robustness of our results beyond the inclusion of basic control variables. These tests are motivated and presented in the following.

##### **4.1. Addressing outliers**

One important concern with most sudden death event studies is that the results might be driven by outliers due to the limited number of executives who die unexpectedly (small samples) and, in particular, the large variation in abnormal stock returns (see Section 2.4). We address this

concern in two ways. The respective results are shown in *Table 6*. First, in regression specifications (1) and (2) we run median regressions which minimize the sum of absolute (instead of squared) residuals. In specifications (3) and (4), we simultaneously exclude outliers, i.e., values smaller (larger) than or equal to the 5<sup>th</sup> (95<sup>th</sup>) percentiles, of both *CAR (-1,1)\_FF3* and our measures of general managerial skills. The coefficients of *GAI index* and *GAI unweighted* remain statistically significant throughout all regressions. In additional unreported regressions, we find that the coefficient of *Generalist* remains significant at the 10% level when we use a median regression or when we exclude outliers of *CAR (-1,1)\_FF3*. In sum, the outlier tests support our main findings from Section 3.1.

#### **4.2. Alternative explanations**

Another important concern is that general managerial skills might correlate with other (confounding) variables relevant for shareholder value, for example, other managerial attributes. That means, we might falsely attribute the previous results on shareholder value to generalists although they are actually just the outcome of attributes that many generalists share or the result of other potential spurious regressions. Hence, in *Table 7* and *Table 8* we show results of regressions where we reestimate specification (3) of *Table 4* and include additional controls to account for alternative explanations.

In *Table 7*, we start with the probably most obvious alternative explanation: the general ability index might capture executives' innate talent which may be both beneficial for shareholders and costly to replace. To address this concern, we use two established measures of executive talent. In specification (1), we restrict the sample to suddenly deceased CEOs and control for the variable *First CEO age* which measures the age at which a CEO became CEO for the first time. We report a median *First CEO age* of 48 years similar to Custódio, Ferreira, and

Matos (2013) who propose to use this variable as a control for CEOs' innate talent.<sup>7</sup> Because the age at which an executive became CEO for the first time is not available for all observations in our sample and because it is not an optimal measure of innate talent for executives other than the CEO, in specification (2) we use the variable *Tenure/age*, proposed by Bhagat and Bolton (2013). It is defined as the ratio of a deceased executive's tenure to its age (both at the time of his or her death). The longer an executive has been in a top position relative to his or her age, the more talented the executive is likely to be.

In specifications (3) and (4), we address time trends as another alternative explanation. Using a sample of executive sudden deaths between 1950 and 2009, Quigley, Crossland, and Campbell (2016) provide evidence that the value of executives and/or their impact on the firms they run has increased over time. Given the positive time trend of the general ability index we report in Figure 2, our evidence of a positive valuation effect of general managerial skills might just reflect the generally increasing value (and impact) of executives over time. Therefore, in specification (3) we control for the variable *Year*, which is a count variable that takes on values between 1980 and 2012, while in specification (4) we control for time fixed effects using four dummy variables, one for each decade of our sample period (i.e., 1980s, 1990s, 2000s, and 2010s). Finally, in specification (5) we simultaneously control for CEO talent, the time trend as well as for industry fixed effects based on the Fama and French 10 industry classification.

As can be seen from Table 7, the coefficient for *GAI index* remains negative and significant at the 5% level or better throughout all five regression specifications. The economic magnitude of general managerial skills also remains significant. An increase in the *GAI index* by one standard deviation is associated with a decrease in abnormal stock returns of 1.8 to 2.1 percentage points.

---

<sup>7</sup> Custódio, Ferreira, and Matos (2013) address CEO talent as an alternative explanation for their finding of a generalist pay premium. Their results suggest that the GAI index does not significantly capture talent.

Even when we additionally include industry fixed effects in specification (5), the economic effect still amounts to 1.5 percentage points. In unreported regressions, we find that the regression coefficient of *GAI index* remains statistically and economically significant when we use industry fixed effects based on the Fama and French 48 industry classification.

We now turn to *Table 8* for further alternative explanations related to executives' education and network.<sup>8</sup> Executives with higher education and better networks might be costly to replace and particularly valuable to shareholders, for example, because better educated and connected executives may more accurately assess firm and industry prospects and ultimately make better investment decisions. Thus, in specification (1) we use the variable *Uni degree* – which takes the values 0 (no degree), 1 (Bachelor), 2 (Master), 3 (PhD) – as an education-based measure of executive talent. In specification (2), we use *Ivy League*, an indicator variable which equals one if an executive graduated from an Ivy League school (i.e., Brown, Columbia, Cornell, Dartmouth, Harvard, UPenn, Princeton and Yale). The fraction of CEOs and presidents in our sample who graduated from an Ivy League school is 21%, identical to the fraction reported in Custódio, Ferreira, and Matos (2013) who use this variable as another control for executive talent. While *Ivy League* may serve as a measure for talent, it can also be used as an executive network measure given that Ivy League schools, both historically and geographically, have formed a network and given the huge relative fraction of CEOs who attended one of these eight schools. In specification (3), we use both variables *Uni degree* and *Ivy League*. Finally, in specification (4) we use the number of external board seats held by an executive, denoted *Outside directorships*, as an alternative variable to control for executives' networks. As *Table 8* shows, in all four

---

<sup>8</sup> The regression results shown in *Table 8* are based on fewer observations as the necessary data is not available for all CEOs and presidents in our sample.

regression specifications the coefficient for *GAI index* remains significant, both statistically and economically.

Overall, from the results presented in this section we conclude that the positive impact of general managerial skills on shareholder value is unlikely to be attributed to the aforementioned alternative explanations.

### **4.3. Further robustness tests**

In the following, we consider several additional robustness tests. As a first test, we examine the role of executive succession and the impact of different causes of sudden deaths. To this end, we reestimate regression specification (3) of Table 4 for different subsamples. The regression results are shown in *Table 9*. For brevity, we only report the coefficient for the variable *GAI index*, the respective t-statistic and the number of observations.

As an intuitive test of our hypothesis that generalist executives benefit shareholder value, we exclude all cases of sudden deaths in which a deceased executive is permanently replaced by an outsider (i.e., the variable *Successor is firm insider* equals one for all remaining observations). Given that insiders tend to have less general managerial ability (see Custódio, Ferreira, and Matos, 2013) and given that the stock market reaction to announcements of executives' unexpected deaths incorporates the expected likelihood that the deceased executive will be replaced by an insider, we should find a more negative average abnormal stock return for the subsample of inside replacements if generalists matter for shareholder value. The results in specification (1) confirm our expectation. The stock market reaction is indeed more negative (the coefficient amounts to -0.0256) and also statistically more significant (1% level) than the results shown in specification (3) of Table 4. Specifically, the economic effect is 28% larger on a relative basis.



The above finding implies that our results might be driven by firms which find it hard to replace valuable executive talent. If this was the case, the results of our study would not be generalizable. We address this concern in regression specifications (2), (3) and (4) where we exclude small firms (with below median firm size by total assets or market value) and young firms (with below median age), respectively. Smaller and younger firms should find it particularly difficult to replace executive talent. The regression coefficient for *GAI index* remains statistically significant in all three regressions, suggesting that our results are unlikely to be driven by firms that find it hard to recruit valuable executives.<sup>9</sup>

Finally, in regression specification (5) of Table 9, we exclude cases of sudden deaths if the cause of death is a heart attack or if it is unknown (i.e., it could be a heart attack or heart failure). One might argue that heart attacks can be related to previous firm performance, which would render these deaths ‘less exogenous’ events. The regression coefficient for *GAI index* remains significant (at the 10% level) when we restrict the sample to sudden deaths caused by accidents and strokes, which are probably the most unexpected and sudden death events. In unreported regressions, we exclude only those cases of sudden deaths for which i) the cause of death is unknown or ii) the cause of death is a heart attack, separately. Results remain statistically significant.

As a second robustness test, shown in *Table 10*, we reestimate regression specifications from Table 4 and include additional control variables. We use *Successor is firm insider* to account for the fact that the stock market reaction to unexpected executive deaths incorporates information about the expected successor of a suddenly deceased executive. In this regard, we argue that if

---

<sup>9</sup> We note that the coefficient for *GAI index* is considerably larger when we restrict the sample to larger firms in specifications (2) and (3). This result is consistent with a competitive sorting model of the executive labor market where better executives with more skills tend to run bigger companies because the marginal impact of executive talent can be expected to increase in firm size (see Falato, Li, and Milbourn, 2015, and the literature therein). In this regard, we provide multivariate evidence for a positive relation between general managerial skills and firm size in Table 2.

the permanent successor was a firm insider, it is more likely that a succession plan existed at the time the sudden executive death took place. To further control for succession, we include the dummy *President* to account for cases where the deceased CEO held the president title, i.e., succession was unlikely to be planned as “the baton had not yet been passed” to the heir apparent (see Adams, Almeida, and Ferreira, 2005, p.1409). We also control for the variable *Ownership20%* (following Bebchuk, Cremers, and Peyer, 2011) which equals one if a deceased executive owned more than 20 percent of the firm’s stock. This variable is likely to correlate negatively with general managerial skills, while it may have a positive or negative effect on shareholder value depending on the trade-off between incentives and entrenchment/power that come with executive ownership. As additional firm controls, we include *Firm age (CRSP)*, *CapEx/NetPPE*, *Leverage*, *R&D*, and *Business segments* (as reported in Compustat) because Custódio, Ferreira, and Matos (2013) show that these variables significantly differ between generalists and specialists. The regression results with the aforementioned additional controls reveal that the coefficients for *GAI index*, *Generalist* and *GAI unweighted* all remain significant at the 5% level, while only the variables *Ownership20%* and *Successor is firm insider* seem to add additional explanatory power for abnormal stock returns. The positive coefficient of the latter variable is consistent with a less negative stock price reaction to sudden deaths when executive succession plans (are more likely to) exist.

Finally, *Appendix C* shows regression results of reestimations of regression specification (3) of Table 4 with alternative measures of abnormal stock returns, i.e., alternative dependent variables. In particular, we use *SCAR (-1,1)* and *CAR (-1,1)\_4F* in specifications (1) and (2), respectively, while we use *CAR (-1,1)\_FF3 winsorized* and *CAR (-1,1)\_MM winsorized* in specification (3) and specification (4). We winsorize all variables at the 5<sup>th</sup> and 95<sup>th</sup> percentiles. Finally, in specification (5), which is estimated using a probit model, we use *CAR (-1,1)\_MM < 0*

(*dummy*), an indicator variable that equals one if the market-model abnormal return is below zero. Again, throughout all regressions the coefficient for *GAI index* remains statistically significant.

## **5. Difficult corporate tasks and the value of general managerial skills**

Sections 3 and 4 have provided robust evidence that general managerial skills, on average, have a positive effect on shareholder value. In this section, we present additional evidence on the relation between general managerial skills, the management of difficult corporate tasks, and shareholder value. We thereby provide some insights with regard to the question for which firms generalist executives are particularly valuable.

We build our analysis on Custódio, Ferreira, and Matos' (2013) finding (and reasoning) that the pay premium for generalists is higher when CEOs are hired to perform difficult tasks, such as restructurings, which often necessitate adapting to changing business environments. This finding suggests that generalist executives can be expected to be particularly valuable (and thus firms are willing to pay them a premium) when firms have to undergo drastic changes, like necessary disinvestments (e.g., asset sales and plant closures), and when they need to seek new investment opportunities. General managerial skills can facilitate corporate management and leadership in such situations as generalists tend to be better able to adapt to changing business environments (see Guay, Taylor, and Xiao, 2014) and as generalists may find it easier to identify new growth prospects (in line with the anecdotal evidence in footnote 1). Furthermore, broad managerial work experience likely fosters necessary problem solving at the top and coordination with several people inside and outside the firm when situations become difficult and corporate circumstances change. Because firms with more growth prospects are less likely to be in need of performing difficult tasks and because they less likely have to seek for new investments , we hypothesize that

the value of general managerial skills is higher (lower) when firms have fewer (more) growth opportunities.

To test the aforementioned hypothesis, we use several measures of firms' growth opportunities proposed by the existing literature (see, e.g., Adam and Goyal, 2008): the market-to-book ratio (*MTB*), *Tobin's Q*, and capital expenditures to net property plant and equipment (*CapEx/NetPPE*). We further use return on assets (*ROA*) as an alternative (however more biased and indirect) measure for a firm's need to undergo changes and adapt to new business environments. To identify whether general managerial skills matter more when firms have fewer growth opportunities, we use interaction terms of our growth measures (and *ROA*) with the variable *GAI index*. If our hypothesis is true, we have to find significantly positive interaction terms in addition to the negative coefficient for *GAI index*, indicating that general managerial skills are less valuable when firms have more growth opportunities.

The results of our tests are shown in *Table 11*. We reestimate regression specification (3) of *Table 4* and include the proposed interaction terms. While the coefficient for *GAI index* is negative and statistically significant at the 1% level in all four regression specifications, the coefficients for *GAI index\*MTB*, *GAI index\*Tobin's Q* and *GAI index\*CapEx/NetPPE* are all positive, as expected, and significant at the 5% level. Only the coefficient for *GAI index\*ROA* is not significant. The coefficients of the interactions terms suggest that only for firms with very high growth opportunities (e.g., *MTB* > 6) generalists do not benefit shareholder value, i.e., the overall effect becomes positive. In unreported regressions, we repeat the analysis with the variable *GAI unweighted* instead of *GAI index* and find similar results. In sum, we provide evidence for our hypothesis that general managerial skills are particularly valuable when firms have low growth opportunities, i.e., when executives have to perform difficult corporate tasks.

This result supports Custódio, Ferreira, and Matos' (2013) finding of a higher pay premium for generalist CEOs who are hired to perform such tasks.

## **6. Conclusions**

In this study, we test the hypothesis that executives' general managerial skills benefit shareholder value as they facilitate management and leadership of modern corporations. Supporting the above hypothesis, we document a significantly positive and economically meaningful effect of general managerial skills on shareholder value using 171 sudden executive deaths between 1980 and 2012. In particular, we find that a one-standard-deviation increase in the general ability index is found to correspond to at least a 1.5 percentage point decrease in abnormal stock returns to announcements of sudden deaths. Our findings further suggest that generalist executives are particularly valuable for firms with fewer growth prospects where the need to perform difficult tasks (e.g., restructurings) and to adapt to new business environments is considerably higher.

The positive impact of executives' general managerial skills on shareholder value found in this paper provides a market-based explanation for the documented hiring and pay premium that generalists receive and the increase of general managerial skills over the last decades (Custódio, Ferreira, and Matos, 2013; Murphy and Zbojnik, 2004). Corporate boards and executive search firms should take general managerial ability into account when they seek new executives.

## References

- Adam, T., Goyal, V.K., 2008. The investment opportunity set and its proxy variables. *Journal of Financial Research* 31, 41-63.
- Adams, R.B., Almeida, H., Ferreira, D., 2005. Powerful CEOs and their impact on corporate performance. *Review of Financial Studies* 18, 1403-1432.
- Adams, R.B., Hermalin, B.E., Weisbach, M.S., 2010. The role of boards of directors in corporate governance: A conceptual framework and survey. *Journal of Economic Literature* 48, 58-107.
- Bebchuk, L.A., Cremers, K.J.M., Peyer, U.C., 2011. The CEO pay slice. *Journal of Financial Economics* 102, 199-221.
- Bennedsen, M., Pérez-González, F., Wolfenzon, D., 2010. Do CEOs matter? Working paper. INSEAD, Stanford University and Columbia Business School.
- Bennedsen, M., Pérez-González, F., Wolfenzon, D., 2012. Estimating the value of the boss: Evidence from CEO hospitalization events. Working paper. INSEAD, Stanford University and Columbia Business School.
- Bertrand, M., 2009. CEOs. *Annual Review of Economics* 2009 (1), 121-149.
- Bertrand, M., Schoar, A., 2003. Managing with style: The effect of managers on firm policies. *Quarterly Journal of Economics* 118, 1169-1208.
- Borokhovich, K.A., Parrino, R., Trapani, T., 1996. Outside directors and CEO selection. *Journal of Financial and Quantitative Analysis* 31, 337-355.
- Borokhovich, K.A., Brunarski, K.L., Donahue, M.S., Harman, Y.S., 2006. The importance of board quality in the event of a CEO death. *The Financial Review* 41, 307-337.
- Bhagat, S., Bolton, B., 2013. Director ownership, governance, and performance. *Journal of Financial and Quantitative Analysis* 48, 105-135.
- Carhart, M.M., 1997. On persistence in mutual fund performance. *Journal of Finance* 52, 57-82.
- Chang, Y.Y., Dasgupta, S., Hilary, G., 2010. CEO ability, pay, and firm performance. *Management Science* 56, 1633-1652.
- Custódio, C., Ferreira, M.A., Matos, P., 2013. Generalists versus specialists: Lifetime work experience and CEO pay. *Journal of Financial Economics* 108, 471-492.
- Custódio, C., Ferreira, M.A., Matos, P., 2015. Do general managerial skills spur innovation? ECGI – Finance Working Paper No. 376.
- Custódio, C., Metzger, D., 2013. How do CEOs matter? The effect of industry expertise on acquisition returns. *Review of Financial Studies* 26, 2008-2047.
- Custódio, C., Metzger, D., 2014. Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics* 114, 125-154.
- Dittmar, A., Duchin, R., 2015. Looking in the rearview mirror: The effect of managers' professional experience on corporate financial policy. *Review of Financial Studies*, Forthcoming.
- Eisfeldt, A.L., Kuhnen, C.M., 2013. CEO turnover in a competitive assignment framework. *Journal of Financial Economics* 109, 351-372.
- Falato, A., Li, D., Milbourn, T., 2015. Which skills matter in the market for CEOs? Evidence from pay for CEO credentials. *Management Science* 61, 2845-2869.

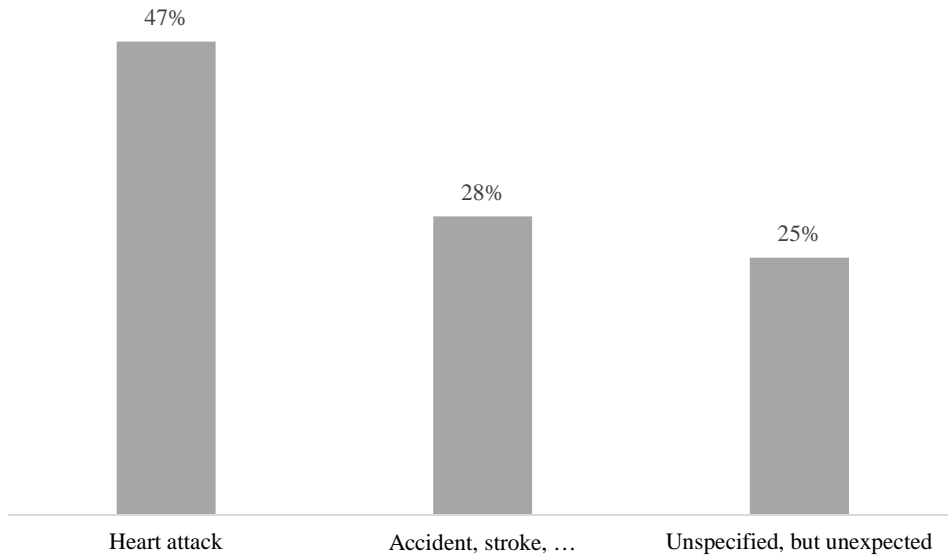
- Fama, E.F., French K.R., 1993. Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 33, 3-56.
- Fee, C.E., Hadlock, C.J., Pierce, J.R., 2013. Managers with and without styles: Evidence using exogenous variation. *Review of Financial Studies* 26, 567-601.
- Ferreira, D., Sah, R.K., 2012. Who gets to the top? Generalists versus specialists in managerial organizations. *RAND Journal of Economics* 43, 577-601.
- Frydman, C., 2014. Rising through the ranks: The evolution of the market for corporate executives, 1936-2003. Working paper. Northwestern University.
- Gabaix, X., Landier, A., 2008. Why has CEO pay increased so much? *Quarterly Journal of Economics* 123, 49-100.
- Garicano, L., 2000. Hierarchies and the organization of knowledge in production. *Journal of Political Economy* 108, 874-904.
- Garicano, L., Rossi-Hansberg, E., 2006. Organization and inequality in a knowledge economy. *Quarterly Journal of Economics* 121, 1383-1435.
- Graham, J.R., Harvey, C.R., Puri, M., 2013. Managerial attitudes and corporate actions. *Journal of Financial Economics* 109, 103-121.
- Graham, J.R., Harvey, C.R., Puri, M., 2016. A corporate beauty contest. *Management Science*, Forthcoming.
- Guadalupe, M., Li, H., Wulf, J., 2014. Who lives in the C-suite? Organizational structure and the division of labor in top management. *Management Science* 60, 824-844.
- Guay, W.R., Taylor, D.J., Xiao, J.J., 2014. Adapt or perish: Evidence of CEO adaptability to industry shocks. Working paper. University of Pennsylvania.
- Jenter, D., Matveyev, E., Roth, L., 2016. Good and bad CEOs. Working paper. London School of Economics and University of Alberta.
- Johnson, W.B., Magee, R.P., Nagarajan, N.J., Newman, H.A., 1985. An analysis of the stock-price reaction to sudden executive deaths – Implications for the managerial labor market. *Journal of Accounting & Economics* 7, 151-174.
- Murphy, K.J., Zbojnik, J., 2004. CEO pay and appointments: A market-based explanation for recent trends. *American Economic Review Papers and Proceedings* 94, 192-196.
- Murphy, K.J., Zbojnik, J., 2007. Managerial capital and the market for CEOs. Working paper. University of Southern California.
- Nguyen, B.D., Nielsen, K.M., 2014. What death can tell: Are executives paid for their contributions to firm value? *Management Science* 60, 2994-3010.
- Quigley, T.J., Crossland, C., Campbell, R.J., 2016. Shareholder perceptions of the changing impact of CEOs: Market reactions to unexpected CEO death, 1950 – 2009. *Strategic Management Journal*, Forthcoming.
- Rajan, R., Wulf, J., 2006. The flattening firm: Evidence from panel data on the changing nature of corporate hierarchies. *Review of Economics and Statistics* 88, 759-773.
- Salas, J.M., 2010. Entrenchment, governance, and the stock price reaction to sudden executive deaths. *Journal of Banking & Finance* 34, 656-666.

- Schoar, A., Zuo, L., 2016. Shaped by booms and busts: How the economy impacts CEO careers and management style. NBER Working Paper No. 17590.
- Slovin, M.B., Sushka, M.E., 1993. Ownership concentration, corporate control activity, and firm value: Evidence from the death of inside blockholders. *Journal of Finance* 48, 1293-1321.
- Terviö, M., 2008. The difference that CEOs make: An assignment model approach. *American Economic Review* 98, 642-668.
- Worrell, D.L., Davidson, W.N., Chandy, P.R., Garrison, S.L., 1986. Management turnover through deaths of key executives – Effects on investor wealth, *Academy of Management Journal* 29, 674-694.



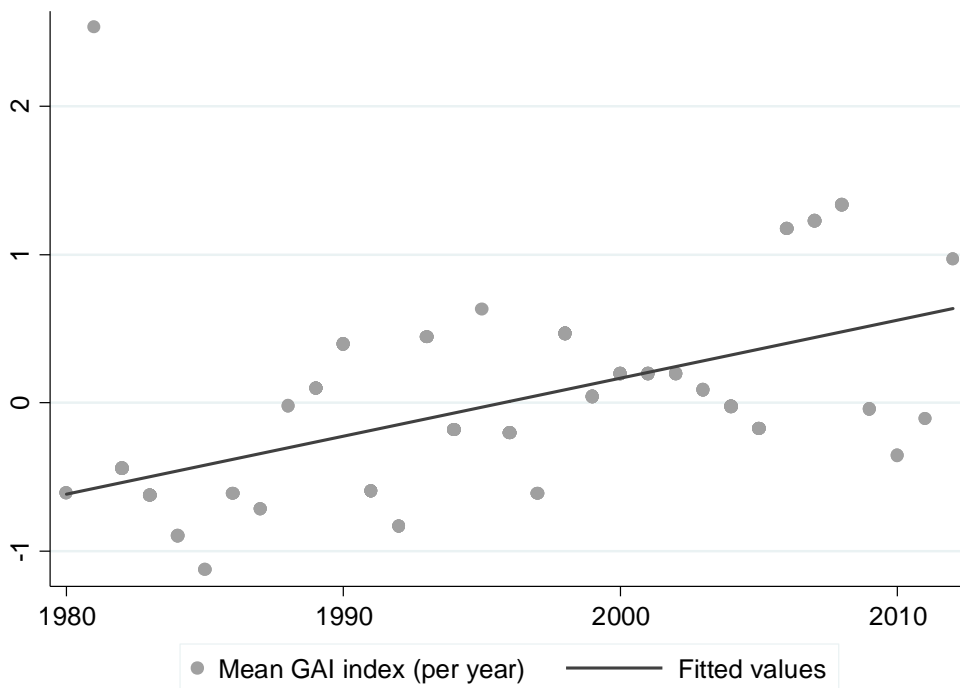
**Figure 1 – Causes of sudden deaths**

This figure shows the causes of deaths for the sample of sudden deaths between 1980 and 2012 used in this study. The sample does not include sudden deaths for which the cause of death is either murder or suicide.



**Figure 2 – General managerial skills over time**

This figure shows the mean GAI index per year for the sample period 1980-2012. The GAI index is defined as in Custódio, Ferreira, and Matos (2013). It is standardized to have a mean of zero and a standard deviation of one.



**Table 1 – Summary statistics**

This table presents summary statistics for the full sample of all sudden death events (Panel A) and for the sample of sudden deaths excluding events of deceased chairmen who were neither CEOs nor presidents (Panel B). All variables are defined in Appendix B.

<b>Variable</b>	<b>N</b>	<b>Median</b>	<b>P25</b>	<b>P75</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b><u>Panel A: All observations</u></b>						
CAR (-1,1)_FF3	171	-0.001	-0.037	0.038	0.002	0.09
CAR (-1,1)_4F	171	-0.001	-0.037	0.038	0.002	0.09
CAR (-1,1)_MM	171	-0.0003	-0.037	0.032	0.003	0.09
GAI index	171	-0.10	-0.58	0.48	0.00	1.00
Age	170	61.50	54.00	69.00	61.78	11.50
CEO	171				0.63	0.49
Chairman	171				0.68	0.47
Consult or Law Experience	171				0.05	0.21
Founder	171				0.29	0.46
President	171				0.46	0.50
Tenure	171	11.00	4.00	23.00	14.84	13.34
Firm age (CRSP)	171	15.00	6.00	26.00	20.29	18.14
Firm size (ln total assets)	168	5.42	3.76	7.31	5.53	2.35
MTB	167	1.68	1.12	2.94	2.36	1.86
ROA	166	0.04	-0.01	0.07	-0.02	0.20
Board size	167	8.00	6.00	11.00	8.54	3.22
Independent board	167				0.32	0.47
Staggered board	166				0.37	0.49
<b><u>Panel B: Sample w/o chairmen who were neither CEOs nor presidents</u></b>						
CAR (-1,1)_FF3	134	-0.005	-0.042	0.026	-0.004	0.10
CAR (-1,1)_4F	134	-0.004	-0.042	0.027	-0.004	0.10
CAR (-1,1)_MM	134	-0.006	-0.048	0.028	-0.002	0.10
GAI index	134	-0.16	-0.60	0.64	0.00	1.00
Age	133	60.00	53.00	64.00	59.36	10.62
CEO	134				0.80	0.40
Consult or Law Experience	134				0.04	0.19
First CEO age (CEOs only)	106	48.00	37.00	56.00	46.04	11.56
Founder	134				0.29	0.46
President	134				0.59	0.49
Successor is firm insider	134				0.88	0.33
Tenure	134	10.00	3.00	20.00	13.01	12.02
Firm age (CRSP)	134	14.00	6.00	28.00	20.28	18.14
Firm size (ln total assets)	131	5.39	3.58	7.36	5.47	2.46
MTB	130	1.70	1.14	3.05	2.42	1.90
ROA	129	0.04	-0.01	0.07	-0.03	0.21
Board size	131	8.00	6.00	11.00	8.51	3.26
Duality (CEOs only)	107				0.69	0.46
Independent board	131				0.35	0.48
Staggered board	130				0.36	0.48

**Table 2 – Determinants of the GAI index**

This table reports results from regressions of the variable *GAI index* (in regression specifications 1-4) or *GAI unweighted* (in specification 5) or *Generalist* (in specification 6) on characteristics of the deceased executives, firm and governance characteristics. All variables are defined in Appendix B. Regression specifications (1) – (5) are estimated using OLS, while specification (6) is estimated using a probit regression model. *Consult or Law Exp.* is omitted in specification (6) as it perfectly predicts the dependent indicator variable *Generalist*. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. Variable:</i>	<i>GAI index</i>				<i>GAI unweighted</i>	<i>Generalist (dummy)</i>
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Executive characteristics:</i>						
Age	0.0257*** (3.071)	0.0129* (1.909)	0.0314*** (3.780)	0.0349*** (4.261)	0.0812*** (4.306)	0.0481*** (3.493)
CEO		0.5005*** (3.511)	0.4677*** (3.475)	0.7991*** (3.724)	1.8971*** (3.807)	1.1227*** (3.073)
Consult or Law Exp.		1.6732** (2.536)	1.6448*** (2.785)	1.3879** (2.347)	3.1979** (2.338)	
Founder		-0.5239*** (-3.383)	-0.1658 (-1.027)	-0.1880 (-1.163)	-0.3999 (-1.062)	-0.0775 (-0.256)
Tenure	-0.0388*** (-6.398)		-0.0319*** (-4.862)	-0.0305*** (-4.787)	-0.0727*** (-4.881)	-0.0590*** (-4.841)
<i>Firm characteristics:</i>						
Firm size		0.0419 (1.142)	0.0262 (0.732)	0.0589 (1.618)	0.1606* (1.896)	0.1170* (1.788)
MTB		0.0346 (1.015)	0.0183 (0.553)	0.0308 (0.896)	0.0603 (0.769)	-0.0245 (-0.404)
ROA		-0.9900** (-2.259)	-0.6759 (-1.492)	-0.6175 (-1.497)	-1.6229* (-1.707)	-0.8371 (-1.206)
<i>Governance characteristics:</i>						
Board size				-0.0378 (-1.335)	-0.0916 (-1.383)	-0.1276*** (-2.588)
Duality				-0.5050** (-2.519)	-1.1877** (-2.527)	-1.1391*** (-3.328)
Independent board				0.2823* (1.814)	0.7001* (1.933)	0.1137 (0.470)
Staggered				-0.0885 (-0.633)	-0.1975 (-0.603)	0.2066 (0.836)
Constant	-1.0062** (-2.233)	-1.3493*** (-3.065)	-1.9691*** (-4.446)	-2.1127*** (-4.533)	1.1883 (1.113)	-2.1475** (-2.532)
Observations	170	164	164	159	159	159
Adj./Pseudo R-squared	0.170	0.226	0.314	0.376	0.430	0.256

**Table 3 – General managerial skills and shareholder value (I)**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs, presidents and chairmen) sudden deaths, measured by the variables *CAR (-1,1)\_MM* (in Panel A and Panel B) and *CAR (-1,1)\_FF3* (in Panel C), on the variables *GAI index* (in Panel A and C) or *Generalist* (in Panel B), *Firm size* and a constant. Chairmen denotes deceased chairmen of the board who were neither CEOs nor presidents. Variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<b>Panel A: Market model (MM) abnormal returns</b>					
<i>Dep. Variable:</i>	<i>CAR (-1,1)_MM</i>				
	All	All	CEOs and presidents	CEOs	Chairmen
	(1)	(2)	(3)	(4)	(5)
<b>GAI index</b>		<b>-0.0116**</b> (-2.009)	<b>-0.0136*</b> (-1.887)	<b>-0.0186**</b> (-2.274)	<b>-0.0037</b> (-0.486)
Firm size	0.0091*** (3.458)	0.0095*** (3.630)	0.0095*** (3.727)	0.0097*** (3.314)	0.0095 (0.899)
Constant	-0.0489*** (-2.665)	-0.0510*** (-2.801)	-0.0558*** (-3.109)	-0.0525*** (-2.638)	-0.0336 (-0.486)
Observations	168	168	131	105	37
Adj. R-squared	0.048	0.059	0.057	0.068	0.005

<b>Panel A: Market model (MM) abnormal returns</b>					
<i>Dep. Variable:</i>	<i>CAR (-1,1)_MM</i>				
	All	All	CEOs and presidents	CEOs	Chairmen
	(1)	(2)	(3)	(4)	(5)
<b>Generalist</b>		<b>-0.0354***</b> (-2.714)	<b>-0.0378**</b> (-2.128)	<b>-0.0467**</b> (-2.272)	<b>-0.0091</b> (-0.372)
Firm size	0.0091*** (3.458)	0.0094*** (3.702)	0.0106*** (4.130)	0.0110*** (3.653)	0.0096 (0.909)
Constant	-0.0489*** (-2.665)	-0.0358* (-1.893)	-0.0412** (-2.032)	-0.0324 (-1.411)	-0.0290 (-0.451)
Observations	168	168	131	105	37
Adj. R-squared	0.048	0.079	0.074	0.087	0.007

<b>Panel C: Fama-French three-factor (FF3) abnormal returns</b>					
<i>Dep. Variable:</i>	<i>CAR (-1,1)_FF3</i>				
	All	All	CEOs and presidents	CEOs	Chairmen
	(1)	(2)	(3)	(4)	(5)
<b>GAI index</b>		<b>-0.0112*</b> (-1.916)	<b>-0.0126*</b> (-1.721)	<b>-0.0170**</b> (-2.048)	<b>-0.0047</b> (-0.583)
Firm size	0.0102*** (3.749)	0.0106*** (3.906)	0.0106*** (3.995)	0.0105*** (3.374)	0.0100 (0.920)
Constant	-0.0559*** (-2.975)	-0.0579*** (-3.102)	-0.0638*** (-3.450)	-0.0607*** (-2.927)	-0.0337 (-0.480)
Observations	168	168	131	105	37
Adj. R-squared	0.061	0.070	0.069	0.073	0.009

**Table 4 – General managerial skills and shareholder value (II)**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs, presidents and chairmen) sudden deaths, measured by the variable *CAR (-1,1)\_FF3*, on the variable *GAI index* (specifications 1-3 and 7) or *Generalist* (specification 4) or *GAI Unweighted* (specification 5) or *Residual GAI index* (specification 6), controls for executive and firm characteristics and a constant. Specification (7) additionally includes controls for governance characteristics. *Residual GAI index* is the residual from a regression of *GAI index* on *Age*, *CEO*, *Consult or Law Exp.*, *Founder*, *Tenure*, and a constant. All other variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. Variable:</i>	<i>CAR (-1,1)_FF3</i>						
	All (1)	(2)	(3)	CEOs and presidents (4) (5)		(6)	(7)
<b>GAI index</b>	<b>-0.0170***</b> (-2.651)	<b>-0.0216***</b> (-2.942)	<b>-0.0200**</b> (-2.578)				<b>-0.0189**</b> (-2.343)
<b>Generalist</b>				<b>-0.0390**</b> (-2.475)			
<b>GAI unweighted</b>					<b>-0.0092**</b> (-2.609)		
<b>Residual GAI index</b>						<b>-0.0157**</b> (-2.014)	
<i>Executive controls:</i>							
Age	0.0030*** (3.584)	0.0035*** (3.287)	0.0032** (2.599)	0.0029** (2.432)	0.0032** (2.595)		0.0033** (2.298)
CEO	0.0193 (1.225)	0.0234 (1.315)	0.0227 (1.242)	0.0198 (1.099)	0.0227 (1.239)		0.0192 (0.906)
Consult or Law Exp.	0.0444* (1.820)	0.0646*** (2.853)	0.0618*** (2.672)	0.0552** (2.091)	0.0618*** (2.681)		0.0640** (2.599)
Founder	0.0059 (0.353)	0.0101 (0.487)	0.0058 (0.284)	0.0049 (0.243)	0.0064 (0.311)		0.0035 (0.175)
Tenure			0.0006 (0.634)	0.0006 (0.633)	0.0005 (0.620)		0.0003 (0.360)
<i>Firm controls:</i>							
Firm size	0.0098*** (2.739)	0.0112*** (3.231)	0.0115*** (3.219)	0.0123*** (3.359)	0.0117*** (3.270)	0.0094*** (2.699)	0.0119** (2.521)
MTB	-0.0024 (-0.849)	0.0001 (0.042)	0.0003 (0.097)	-0.0005 (-0.182)	0.0000 (0.017)	-0.0022 (-0.772)	0.0003 (0.077)
ROA	-0.0182 (-0.610)	-0.0179 (-0.597)	-0.0218 (-0.702)	-0.0197 (-0.629)	-0.0233 (-0.746)	0.0305 (0.873)	-0.0214 (-0.648)
<i>Governance controls:</i>							
Duality							0.0077 (0.557)
Board size							-0.0003 (-0.067)
Independent board							-0.0109 (-0.739)
Staggered board							-0.0057 (-0.420)
Constant	-0.2463*** (-4.184)	-0.2966*** (-4.254)	-0.2857*** (-3.872)	-0.2461*** (-3.445)	-0.2272*** (-3.270)	-0.0485* (-1.872)	-0.2838*** (-3.680)
Observations	164	127	127	127	127	127	123
Adj. R-squared	0.199	0.236	0.232	0.229	0.232	0.088	0.207

**Table 5 – GAI index components**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths, measured by the variables  $CAR(-1,1)_{MM}$  (Panel A) and  $CAR(-1,1)_{FF3}$  (Panel B), on the components of the GAI index, controls for executive and firm characteristics and a constant. The control variables equal those used in regression specification (3) of Table 4. Variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

**Panel A: Market model (MM) abnormal returns**

<i>Dep. Variable:</i>	<i>CAR(-1,1)<sub>MM</sub></i>				
	(1)	(2)	(3)	(4)	(5)
	Number of positions	Number of firms	Number of industries	CEO experience	Conglomerate experience
<b>GAI component</b>	<b>-0.0106*</b> <b>(-1.702)</b>	<b>-0.0175**</b> <b>(-2.089)</b>	<b>-0.0401**</b> <b>(-2.260)</b>	<b>-0.0222</b> <b>(-1.623)</b>	<b>-0.0197</b> <b>(-1.445)</b>
Controls	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes
Observations	127	127	127	127	127
Adj. R-squared	0.206	0.215	0.221	0.202	0.199

**Panel B: Fama-French three-factor (FF3) abnormal returns**

<i>Dep. Variable:</i>	<i>CAR(-1,1)<sub>FF3</sub></i>				
	(1)	(2)	(3)	(4)	(5)
	Number of positions	Number of firms	Number of industries	CEO experience	Conglomerate experience
<b>GAI component</b>	<b>-0.0114*</b> <b>(-1.781)</b>	<b>-0.0164**</b> <b>(-2.078)</b>	<b>-0.0322*</b> <b>(-1.890)</b>	<b>-0.0244*</b> <b>(-1.861)</b>	<b>-0.0194</b> <b>(-1.441)</b>
Controls	Yes	Yes	Yes	Yes	Yes
Constant	Yes	Yes	Yes	Yes	Yes
Observations	127	127	127	127	127
Adj. R-squared	0.211	0.216	0.214	0.207	0.202

**Table 6 – Robustness Test (I):****Median regressions and simultaneous exclusion of outliers of CAR (-1,1) and GAI index**

This table reports results from regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths on the variable *GAI index*, controls for executive and firm characteristics and a constant. Regression specifications (1) and (2) are median regressions. Regression specifications (3) and (4) are basic OLS regressions. Specification (3) excludes observations if i) *CAR (-1,1)\_FF3* is smaller than or equal to the 5<sup>th</sup> percentile, ii) *CAR (-1,1)\_FF3* is larger than or equal to the 95<sup>th</sup> percentile, iii) *GAI index* is smaller than or equal to the 5<sup>th</sup> percentile, iv) *GAI index* is larger than or equal to the 95<sup>th</sup> percentile. Specification (4) excludes observations if i) *CAR (-1,1)\_FF3* is smaller than or equal to the 5<sup>th</sup> percentile, ii) *CAR (-1,1)\_FF3* is larger than or equal to the 95<sup>th</sup> percentile, iii) *GAI unweighted* is smaller than or equal to the 5<sup>th</sup> percentile, iv) *GAI unweighted* is larger than or equal to the 95<sup>th</sup> percentile. All variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. Variable:</i>	<i>CAR (-1,1)_FF3</i>			
	Median regressions		Exclusion of outliers	
	(1)	(2)	(3)	(4)
<b>GAI index</b>	<b>-0.0158*</b> (-1.971)		<b>-0.0228**</b> (-2.169)	
<b>GAI unweighted</b>		<b>-0.0076**</b> (-2.080)		<b>-0.0132***</b> (-2.890)
<i>Executive controls:</i>				
Age	0.0027*** (3.300)	0.0027*** (3.371)	0.0027*** (3.853)	0.0027*** (4.018)
CEO	0.0044 (0.250)	0.0031 (0.175)	0.0051 (0.377)	0.0060 (0.444)
Consult or Law Exp.	0.0276 (0.683)	0.0272 (0.676)	0.0600** (2.320)	0.0682*** (2.829)
Founder	-0.0061 (-0.335)	-0.0023 (-0.130)	0.0047 (0.330)	0.0088 (0.622)
Tenure	0.0001 (0.120)	-0.0000 (-0.041)	0.0002 (0.310)	0.0002 (0.259)
<i>Firm controls:</i>				
Firm size	0.0058* (1.738)	0.0068** (2.028)	0.0114*** (3.638)	0.0131*** (4.208)
MTB	0.0008 (0.201)	0.0003 (0.090)	0.0005 (0.176)	0.0000 (0.003)
ROA	0.0045 (0.117)	-0.0040 (-0.105)	-0.0333 (-1.106)	-0.0484* (-1.670)
Constant	-0.2086*** (-3.991)	-0.1665*** (-3.384)	-0.2400*** (-4.984)	-0.1682*** (-3.268)
Observations	127	127	91	90
% of sample excluded	-	-	28%	29%
Pseudo/Adj. R-squared	0.107	0.108	0.285	0.311

**Table 7 – Robustness Test (II):****Alternative explanations: Innate talent, time and industry effects**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths, measured by the variable *CAR (-1,1)\_FF3*, on the variable *GAI index*, controls for executive and firm characteristics, additional controls which address alternative explanations, and a constant. *Year* is a continuous variable which takes on values between 1980 and 2012. Decade controls are binary variables for the 1980s, 1990s, 2000s and 2010s. Fama and French 10 industry controls are used. All other variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. Variable:</i>	<i>CAR (-1,1)_FF3</i>				
	(1)	(2)	(3)	(4)	(5)
CEOs only					
<b>GAI index</b>	<b>-0.0209**</b> (-2.452)	<b>-0.0206***</b> (-2.677)	<b>-0.0183**</b> (-2.323)	<b>-0.0181**</b> (-2.259)	<b>-0.0151**</b> (-2.036)
<i>Additional controls:</i>					
First CEO age	-0.0045** (-2.009)				
Tenure/Age		-0.6982** (-2.138)			-0.6264* (-1.976)
Year			-0.0014 (-1.480)		-0.0010 (-1.036)
<i>Executive controls:</i>					
Age	0.0067** (2.445)	0.0004 (0.311)	0.0030** (2.470)	0.0029** (2.368)	0.0003 (0.268)
CEO		0.0224 (1.320)	0.0295 (1.514)	0.0270 (1.400)	0.0264 (1.422)
Consult or Law Exp.	0.0487 (1.274)	0.0512** (2.001)	0.0667*** (3.075)	0.0700*** (2.993)	0.0838*** (3.628)
Founder	-0.0035 (-0.190)	0.0107 (0.538)	0.0061 (0.300)	0.0080 (0.379)	0.0216 (1.090)
Tenure	-0.0028 (-1.243)	0.0112** (2.205)	0.0006 (0.678)	0.0006 (0.637)	0.0103** (2.098)
<i>Firm controls:</i>					
Firm size	0.0106** (2.520)	0.0119*** (3.338)	0.0123*** (3.318)	0.0127*** (3.417)	0.0125*** (3.098)
MTB	0.0013 (0.404)	-0.0008 (-0.311)	0.0007 (0.232)	0.0007 (0.245)	-0.0002 (-0.073)
ROA	-0.0126 (-0.361)	-0.0089 (-0.299)	-0.0299 (-0.930)	-0.0288 (-0.914)	-0.0338 (-1.097)
Constant	-0.2183*** (-3.280)	-0.1151 (-1.366)	2.5050 (1.340)	-0.3110*** (-4.052)	1.9734 (0.999)
Decade controls	No	No	No	Yes	No
Industry controls	No	No	No	No	Yes
Observations	101	127	127	127	127
Adj. R-squared	0.305	0.271	0.240	0.230	0.306



**Table 8 – Robustness Test (III):****Alternative explanations: Education and network**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths, measured by the variable *CAR (-1,1)\_FF3*, on the variable *GAI index*, controls for executive and firm characteristics, additional controls which address alternative explanations, and a constant. All other variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

Dep. Variable:	<i>CAR (-1,1)_FF3</i>			
	(1)	(2)	(3)	(4)
<b>GAI index</b>	<b>-0.0188**</b> <b>(-2.219)</b>	<b>-0.0188*</b> <b>(-1.951)</b>	<b>-0.0194**</b> <b>(-2.257)</b>	<b>-0.0162*</b> <b>(-1.895)</b>
<i>Additional controls:</i>				
Uni degree	-0.0193* (-1.764)		-0.0207* (-1.806)	
Ivy League		0.0125 (0.672)	0.0117 (0.600)	
Outside directorships				0.0005 (0.043)
<i>Executive controls:</i>				
Age	0.0026* (1.961)	0.0022 (1.663)	0.0024* (1.915)	0.0031*** (2.991)
CEO	0.0196 (1.006)	0.0339 (1.615)	0.0207 (1.017)	0.0176 (0.768)
Consult or Law Exp.	0.0817*** (2.888)	0.0831*** (2.704)	0.0821*** (2.977)	0.0546** (2.135)
Founder	-0.0043 (-0.122)	-0.0082 (-0.249)	-0.0028 (-0.081)	-0.0148 (-0.843)
Tenure	0.0011 (0.878)	0.0006 (0.597)	0.0009 (0.765)	0.0000 (0.015)
<i>Firm controls:</i>				
Firm size	0.0146*** (3.125)	0.0151*** (3.515)	0.0149*** (3.188)	0.0115*** (3.357)
MTB	0.0057 (1.410)	0.0045 (1.199)	0.0055 (1.310)	0.0015 (0.515)
ROA	-0.0722* (-1.844)	-0.0452 (-1.361)	-0.0728* (-1.883)	-0.0344 (-1.170)
Constant	-0.2589*** (-3.061)	-0.2756*** (-3.204)	-0.2535*** (-3.031)	-0.2761*** (-3.821)
Observations	72	77	72	93
Adj. R-squared	0.235	0.204	0.225	0.255

**Table 9 – Robustness Test (IV):****Executive succession and causes of sudden deaths**

This table reports results from OLS regressions of the following regression model:  $CAR(-1,1)_{FF3} = \alpha + \beta_1 * GAI\ index + \beta_2 * Age + \beta_3 * CEO + \beta_4 * Consult\ or\ Law\ Exp. + \beta_5 * Founder + \beta_6 * Tenure + \beta_7 * Firm\ size + \beta_8 * MTB + \beta_9 * ROA + \varepsilon$ . The regression uses all cases of deceased CEOs or presidents, i.e., the regression model is similar to specification (3) of Table 4. For brevity, only the regression coefficient of the variable *GAI index* is reported. All variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

	<b>Sample</b>	<b>GAI coefficient</b>	<b>t-stat</b>	<b>Obs</b>
1	Successor is firm insider	-.0256	-3.04***	111
2	Firm size (total assets) > Median	-.0268	-2.40**	64
3	Firm size (market cap) > Median	-.0268	-2.41**	65
4	Firm age (CRSP) > Median	-.0220	-1.86*	65
5	w/o heart attacks and unknown deaths reasons	-.0391	-1.86*	33

**Table 10 – Robustness Test (V): Including further control variables**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths, measured by the variable *CAR (-1,1)\_FF3*, on the variable *GAI index* (specifications 1, 2 and 5) or *Generalist* (specification 3) or *GAI unweighted* (specification 4), controls for executive and firm characteristics (both as in specification (3) of Table 4), additional controls, and a constant. Coefficients of the controls for executive and firm characteristics are not reported for brevity. *Ownership20%* is a dummy variable equaling one if the deceased executive owned more than 20% of the firm's stock (similar to Bebchuk, Cremers, and Peyer, 2011). Specifications (2) to (5) further include the variable *Business segments* which is the number of business segments as reported in Compustat (if available). All other variables are defined in Appendix B. The analysis in specification (5) is limited to deceased CEOs. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. variable:</i>	<i>CAR (-1,1)_FF3</i>				
	(1)	(2)	(3)	(4)	(5) CEOs only
<b>GAI index</b>	<b>-0.0193**</b> (-2.507)	<b>-0.0164**</b> (-2.113)			<b>-0.0196**</b> (-2.217)
<b>Generalist</b>			<b>-0.0316**</b> (-2.160)		
<b>GAI unweighted</b>				<b>-0.0076**</b> (-2.128)	
<i>Additional controls:</i>					
Ownership20%	0.0662** (2.200)	0.0703** (2.188)	0.0660** (2.088)	0.0702** (2.190)	0.0647** (1.995)
President	0.0257 (1.098)	0.0201 (0.828)	0.0229 (0.970)	0.0204 (0.843)	0.0259 (1.036)
Successor is firm insider	0.0434** (2.284)	0.0371* (1.801)	0.0399** (1.997)	0.0371* (1.801)	0.0394** (1.996)
CapEx/NetPPE	-0.0196 (-0.424)	-0.0246 (-0.501)	-0.0348 (-0.697)	-0.0248 (-0.504)	-0.0230 (-0.351)
Firm age (CRSP)	0.0004 (0.985)	0.0006 (1.426)	0.0007 (1.549)	0.0006 (1.436)	0.0006 (1.144)
Leverage	-0.0327 (-0.927)	-0.0409 (-1.042)	-0.0346 (-0.916)	-0.0409 (-1.046)	-0.0355 (-0.890)
R&D	-0.0572 (-0.608)	-0.0980 (-1.089)	-0.1110 (-1.243)	-0.0963 (-1.070)	-0.0066 (-0.059)
Business Segments		-0.0013 (-0.843)	-0.0015 (-1.014)	-0.0012 (-0.823)	
Constant	-0.3727*** (-4.138)	-0.3412*** (-3.552)	-0.3086*** (-3.269)	-0.2934*** (-3.069)	-0.3172*** (-3.606)
Executive characteristics	Yes	Yes	Yes	Yes	Yes
Firm characteristics	Yes	Yes	Yes	Yes	Yes
Observations	120	113	113	113	95
Adj. R-squared	0.287	0.278	0.277	0.278	0.263

**Table 11 – Difficult corporate tasks and the value of general managerial skills**

This table reports results from OLS regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths, measured by the variable *CAR (-1,1)\_FF3*, on the variable *GAI index*, interaction terms of the variable *GAI index* with the variables *MTB*, *CapEx/NetPPE*, *Tobin's Q*, and *ROA* as well as controls for executive and firm characteristics and a constant. All variables are defined in Appendix B. t-statistics are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

<i>Dep. variable:</i>	<i>CAR (-1,1)_FF3</i>			
	(1)	(2)	(3)	(4)
<b>GAI index</b>	<b>-0.0352***</b> (-3.046)	<b>-0.0401***</b> (-2.952)	<b>-0.0393***</b> (-2.946)	<b>-0.0218***</b> (-2.651)
<i>Interaction terms:</i>				
GAI index * MTB	0.0059** (2.061)			
GAI index * Tobin's Q		0.0107** (2.036)		
GAI index * CapEx/NetPPE			0.0697** (2.234)	
GAI index * ROA				-0.0304 (-1.245)
<i>Executive controls:</i>				
Age	0.0031** (2.577)	0.0032*** (2.634)	0.0034*** (2.757)	0.0033*** (2.673)
CEO	0.0188 (1.051)	0.0187 (1.041)	0.0184 (0.968)	0.0219 (1.200)
Consult or Law Exp.	0.0656*** (2.674)	0.0659*** (2.699)	0.0653** (2.547)	0.0640*** (2.857)
Founder	0.0077 (0.378)	0.0094 (0.447)	0.0061 (0.286)	0.0050 (0.244)
Tenure	0.0005 (0.586)	0.0005 (0.536)	0.0003 (0.311)	0.0004 (0.497)
<i>Firm controls:</i>				
Firm size	0.0119*** (3.364)	0.0116*** (3.299)	0.0118*** (2.728)	0.0112*** (3.073)
MTB	-0.0004 (-0.157)		0.0011 (0.370)	-0.0005 (-0.178)
ROA	-0.0055 (-0.176)	-0.0080 (-0.259)	-0.0161 (-0.422)	-0.0060 (-0.182)
CapEx/NetPPE			-0.0025 (-0.056)	
Tobin's Q		-0.0012 (-0.184)		
Constant	-0.2791*** (-3.866)	-0.2793*** (-3.829)	-0.2944*** (-4.099)	-0.2850*** (-3.921)
Observations	127	127	120	127
Adj. R-squared	0.242	0.242	0.233	0.232

## Appendices

### Appendix A – Distribution of sudden deaths over time

This table shows the distribution of sudden deaths over time for the sample period 1980-2012.

Period	N	Share of total
1980s	43	25.2%
1990s	66	38.6%
2000s	56	32.7%
2010s	6	3.5%

## Appendix B – Variable definitions

This table 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 5<sup>th</sup> and 95<sup>th</sup> percentiles.

Variable	Definition
<b>Abnormal returns:</b>	
CAR (-1,1)	Cumulative abnormal return between t-1 and t+1 where t is the date of death or the next trading day in case death took place on a non-trading day. Estimated using either the market model (denoted as <i>CAR (-1,1)_MM</i> ) or multi-factor models ( <i>CAR (-1,1)_FF3</i> or <i>CAR (-1,1)_4F</i> ).
SCAR (-1,1)	CAR (-1,1) divided by a firm's standard deviation of abnormal stock returns from the event study estimation window. Estimated using the market model.
<b>Executive characteristics:</b>	
Age	Age of the deceased executive at the time of his or her death.
CEO	Dummy equaling 1 if the deceased executive was the firm's CEO, 0 otherwise.
Chairman	Dummy equaling 1 if the deceased executive was the firm's chairman, 0 otherwise.
Consult or Law Exp.	Dummy equaling 1 if the deceased executive had work experience with either a consulting or a law firm, 0 otherwise.
First CEO Age	Age at which the deceased executive first became CEO (for CEOs only).
Founder	Dummy equaling 1 if the deceased executive was the firm's founder or the founder's offspring, 0 otherwise.
GAI index	General ability index, defined as in Custódio, Ferreira, and Matos (2013). <i>GAI index</i> is standardized to have a mean of zero and a standard deviation of one. Larger GAI index values indicate higher general managerial skills.
GAI unweighted	Sum of the five unweighted GAI index components (i.e., # management positions, # firms, # industries, was CEO before, worked for conglomerate).
Generalist	Dummy equaling 1 if a deceased executive's GAI index is above the median of the variable <i>GAI index</i> , 0 otherwise.
Ivy League	Dummy equaling 1 if the deceased executive graduated from an Ivy League school at any level, 0 otherwise.
President	Dummy equaling 1 if the deceased executive was the firm's president, 0 otherwise.
Outside directorships	Natural logarithm of the number of external board seats a deceased executive held.
Successor is firm insider	Dummy equaling 1 if the deceased executive's permanent successor is a firm insider, 0 otherwise.
Tenure	Tenure of the deceased executive at the time of his or her death.
Uni degree	The deceased executive's education. The variable <i>Uni degree</i> takes the values 0 (no degree), 1 (Bachelor), 2 (Master), 3 (PhD).
<b>Firm characteristics:</b>	
CapEx/NetPPE	Capital expenditures divided by net property plant and equipment (PPE) (winsorized).
Firm age (CRSP)	Firm age since IPO (based on the CRSP inclusion date).
Firm size	Logarithm of a firm's total assets (ln(assets)).
Leverage	Total liabilities 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).
R&D	Ratio of R&D expenses to total assets (winsorized).
Tobin's Q	(Market value of equity + preferred stock + total liabilities) / total assets (winsorized).
<b>Governance characteristics:</b>	
Board size	The number of directors on the firm's board of directors.
Duality	Dummy equaling 1 if the deceased was the firm's CEO and chairman, 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, 0 otherwise.
Staggered board	Dummy equaling 1 if the firm's board of directors has staggered election terms, 0 otherwise.

### Appendix C – Robustness Test (VI): Alternative measures of abnormal returns

This table reports results from regressions of the abnormal stock price reaction around executive (CEOs and presidents) sudden deaths on the variable *GAI index*, controls for executive and firm characteristics and a constant. All variables are defined in Appendix B. In regression specifications (3) and (4), respectively, *CAR (-1,1)\_MM* and *CAR (-1,1)\_FF3* are winsorized at the 5<sup>th</sup> and 95<sup>th</sup> percentiles. Specification (5) is a probit regression. *CAR (-1,1)\_MM < 0* is a dummy variable equaling 1 if *CAR (-1,1)\_MM* is smaller than zero, 0 otherwise. t-statistics (z-statistics) are estimated using robust standard errors. \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% level.

Dep. variable:	<i>SCAR (-1,1)</i>	<i>CAR (-1,1)_4F</i>	<i>CAR (-1,1)_FF3 winsorized</i>	<i>CAR (-1,1)_MM winsorized</i>	<i>CAR (-1,1)_MM &lt; 0 (dummy)</i>
	(1)	(2)	(3)	(4)	(5)
<b>GAI index</b>	<b>-0.8601**</b> (-2.488)	<b>-0.0198**</b> (-2.468)	<b>-0.0154**</b> (-2.403)	<b>-0.0158**</b> (-2.517)	<b>0.2669*</b> (1.774)
<i>Executive controls:</i>					
Age	0.1351** (2.366)	0.0031** (2.553)	0.0023*** (3.099)	0.0022*** (3.106)	-0.0266* (-1.921)
CEO	0.4199 (0.477)	0.0228 (1.279)	0.0103 (0.773)	0.0178 (1.323)	-0.6955** (-2.078)
Consult or Law Exp.	5.4065 (1.277)	0.0627*** (2.648)	0.0534* (1.947)	0.0472* (1.723)	-0.8974 (-1.482)
Founder	0.6392 (0.660)	0.0048 (0.232)	0.0005 (0.033)	0.0070 (0.463)	-0.1868 (-0.574)
Tenure	0.0285 (0.766)	0.0006 (0.653)	0.0006 (0.918)	0.0006 (0.951)	-0.0082 (-0.600)
<i>Firm controls:</i>					
Firm size	0.3303** (2.059)	0.0120*** (3.338)	0.0108*** (3.860)	0.0106*** (3.868)	-0.1188* (-1.933)
MTB	-0.0321 (-0.329)	0.0004 (0.136)	0.0005 (0.188)	-0.0006 (-0.274)	-0.0204 (-0.304)
ROA	-1.5581 (-1.233)	-0.0280 (-0.878)	-0.0134 (-0.488)	-0.0267 (-0.885)	-0.1598 (-0.241)
Constant	-10.1756*** (-3.418)	-0.2862*** (-3.899)	-0.2196*** (-4.600)	-0.2180*** (-4.905)	3.2429*** (3.254)
Observations	127	127	127	127	127
Adj./Pseudo R-sq.	0.159	0.229	0.278	0.262	0.129

CFR Working Papers are available for download from [www.cfr-cologne.de](http://www.cfr-cologne.de).

Hardcopies can be ordered from: Centre for Financial Research (CFR),  
Albertus Magnus Platz, 50923 Koeln, Germany.

## 2016

No.	Author(s)	Title
16-12	A.Betzer, M. Ibel, H.S. Lee, P. Limbach, J.M. Salas	Are Generalists Beneficial to Corporate Shareholders? Evidence from Sudden Deaths
16-11	P. Limbach, M. Schmid, M. Scholz-Daneshgari	Do CEOs Matter? Corporate Performance and the CEO Life Cycle
16-10	V. Agarwal, R. Vashishtha, M. Venkatachalam	Mutual fund transparency and corporate myopia
16-09	M.-A. Göricke	Do Generalists Profit from the Fund Families' Specialists? Evidence from Mutual Fund Families Offering Sector Funds
16-08	S. Kanne, O. Korn, M.Uhrig-Homburg	Stock Illiquidity, Option Prices and Option Returns
16-07	S. Jaspersen	Market Power in the Portfolio: Product Market Competition and Mutual Fund Performance
16-06	O. Korn, M.-O. Rieger	Hedging With Regret
16-05	E. Theissen, C. Westheide	Call of Duty: Designated Market Maker Participation in Call Auctions
16-04	P. Gomber, S. Sagade, E. Theissen, M.C. Weber, C. Westheide	Spoilt for Choice: Order Routing Decisions in Fragmented Equity Markets
16-03	T.Martin, F. Sonnenburg	Managerial Ownership Changes and Mutual Fund Performance
16-02	A.Gargano, A. G. Rossi, R. Wermers	The Freedom of Information Act and the Race Towards Information Acquisition
16-01	G. Cici, S. Gibson, C. Rosenfeld	Cross-Company Effects of Common Ownership: Dealings Between Borrowers and Lenders With a Common Blockholder

## 2015

No.	Author(s)	Title
15-17	O. Korn, L. Kuntz	Low-Beta Investment Strategies



15-16	D. Blake, A.G. Rossi, A. Timmermann, I. Tonks, R. Wermers	Network Centrality and Pension Fund Performance
15-15	S. Jank, E. Smajlbegovic	Dissecting Short-Sale Performance: Evidence from Large Position Disclosures
15-14	M. Doumet, P. Limbach, E. Theissen	Ich bin dann mal weg: Werteffekte von Delistings deutscher Aktiengesellschaften nach dem Frosta-Urteil
15-13	G. Borisova, P.K. Yadav	Government Ownership, Informed Trading and Private Information
15-12	V. Agarwal, G.O. Aragon, Z. Shi	Funding Liquidity Risk of Funds of Hedge Funds: Evidence from their Holdings
15-11	L. Ederington, W. Guan, P.K. Yadav	Dealer spreads in the corporate Bond Market: Agent vs. Market-Making Roles
15-10	J.R. Black, D. Stock, P.K. Yadav	The Pricing of Different Dimensions of Liquidity: Evidence from Government Guaranteed Bank Bonds
15-09	V. Agarwal, H. Zhao	Interfund lending in mutual fund families: Role of internal capital markets
15-08	V. Agarwal, T. C. Green, H. Ren	Alpha or Beta in the Eye of the Beholder: What drives Hedge Fund Flows?
15-07	V. Agarwal, S. Ruenzi, F. Weigert	Tail risk in hedge funds: A unique view from portfolio holdings
15-06	C. Lan, F. Moneta, R. Wermers	Mutual Fund Investment Horizon and Performance
15-05	L.K. Dahm, C. Sorhage	Milk or Wine: Mutual Funds' (Dis)economies of Life
15-04	A. Kempf, D. Mayston, M. Gehde-Trapp, P. K. Yadav	Resiliency: A Dynamic View of Liquidity
15-03	V. Agarwal, Y. E. Arisoy, N. Y. Naik	Volatility of Aggregate Volatility and Hedge Funds Returns
15-02	G. Cici, S. Jaspersen, A. Kempf	Speed of Information Diffusion within Fund Families
15-01	M. Baltzer, S. Jank, E. Smajlbegovic	Who trades on momentum?

## 2014

No.	Author(s)	Title
14-15	M. Baltzer, S. Jank, E. Smajlbegovic	Who Trades on Monumentum?
14-14	G. Cici, L. K. Dahm, A. Kempf	Trading Efficiency of Fund Families: Impact on Fund Performance and Investment Behavior
14-13	V. Agarwal, Y. Lu, S. Ray	Under one roof: A study of simultaneously managed hedge funds and funds of hedge funds
14-12	P. Limbach, F. Sonnenburg	Does CEO Fitness Matter?

14-11	G. Cici, M. Gehde-Trapp, M. Göricke, A. Kempf	What They Did in their Previous Life: The Investment Value of Mutual Fund Managers' Experience outside the Financial Sector
14-10	O. Korn, P. Krischak, E. Theissen	Illiquidity Transmission from Spot to Futures Markets
14-09	E. Theissen, L. S. Zehnder	Estimation of Trading Costs: Trade Indicator Models Revisited
14-08	C. Fink, E. Theissen	Dividend Taxation and DAX Futures Prices
14-07	F. Brinkmann, O. Korn	Risk-adjusted Option-implied Moments
14-06	J. Grammig, J. Sönksen	Consumption-Based Asset Pricing with Rare Disaster Risk
14-05	J. Grammig, E. Schaub	Give me strong moments and time – Combining GMM and SMM to estimate long-run risk asset pricing
14-04	C. Sorhage	Outsourcing of Mutual Funds' Non-core Competencies
14-03	D. Hess, P. Immenkötter	How Much Is Too Much? Debt Capacity And Financial Flexibility
14-02	C. Andres, M. Doumet, E. Fernau, E. Theissen	The Lintner model revisited: Dividends versus total payouts
14-01	N.F. Carline, S. C. Linn, P. K. Yadav	Corporate Governance and the Nature of Takeover Resistance

## 2013

No.	Author(s)	Title
13-11	R. Baule, O. Korn, S. Saßning	Which Beta is Best? On the Information Content of Option-implied Betas
13-10	V. Agarwal, L. Ma, K. Mullally	Managerial Multitasking in the Mutual Fund Industry
13-09	M. J. Kamstra, L.A. Kramer, M.D. Levi, R. Wermers	Seasonal Asset Allocation: Evidence from Mutual Fund Flows
13-08	F. Brinkmann, A. Kempf, O. Korn	Forward-Looking Measures of Higher-Order Dependencies with an Application to Portfolio Selection
13-07	G. Cici, S. Gibson, Y. Gunduz, J.J. Merrick, Jr.	Market Transparency and the Marking Precision of Bond Mutual Fund Managers
13-06	S. Bethke, M. Gehde-Trapp, A. Kempf	Investor Sentiment, Flight-to-Quality, and Corporate Bond Comovement
13-05	P. Schuster, M. Trapp, M. Uhrig-Homburg	A Heterogeneous Agents Equilibrium Model for the Term Structure of Bond Market Liquidity
13-04	V. Agarwal, K. Mullally, Y. Tang, B. Yang	Mandatory Portfolio Disclosure, Stock Liquidity, and Mutual Fund Performance
13-03	V. Agarwal, V. Nanda, S.Ray	Institutional Investment and Intermediation in the Hedge Fund Industry
13-02	C. Andres, A. Betzer, M. Doumet, E. Theissen	Open Market Share Repurchases in Germany: A Conditional Event Study Approach

13-01 J. Gaul, E. Theissen A Partially Linear Approach to Modelling the Dynamics of Spot and Futures Price

## 2012

No.	Author(s)	Title
12-12	M. Gehde-Trapp, Y. Gündüz, J. Nasev	The liquidity premium in CDS transaction prices: Do frictions matter?
12-11	Y. Wu, R. Wermers, J. Zechner	Governance and Shareholder Value in Delegated Portfolio Management: The Case of Closed-End Funds
12-10	M. Trapp, C. Wewel	Transatlantic Systemic Risk
12-09	G. Cici, A. Kempf, C. Sorhage	Do Financial Advisors Provide Tangible Benefits for Investors? Evidence from Tax-Motivated Mutual Fund Flows
12-08	S. Jank	Changes in the composition of publicly traded firms: Implications for the dividend-price ratio and return predictability
12-07	G. Cici, C. Rosenfeld	A Study of Analyst-Run Mutual Funds: The Abilities and Roles of Buy-Side Analysts
12-06	A. Kempf, A. Pütz, F. Sonnenburg	Fund Manager Duality: Impact on Performance and Investment Behavior
12-05	L. Schmidt, A. Timmermann, R. Wermers	Runs on Money Market Mutual Funds
12-04	R. Wermers	A matter of style: The causes and consequences of style drift in institutional portfolios
12-03	C. Andres, A. Betzer, I. van den Bongard, C. Haesner, E. Theissen	Dividend Announcements Reconsidered: Dividend Changes versus Dividend Surprises
12-02	C. Andres, E. Fernau, E. Theissen	Should I Stay or Should I Go? Former CEOs as Monitors
12-01	L. Andreu, A. Pütz	Choosing two business degrees versus choosing one: What does it tell about mutual fund managers' investment behavior?

## 2011

No.	Author(s)	Title
11-16	V. Agarwal, J.-P. Gómez, R. Priestley	Management Compensation and Market Timing under Portfolio Constraints
11-15	T. Dimpfl, S. Jank	Can Internet Search Queries Help to Predict Stock Market Volatility?
11-14	P. Gomber, U. Schweickert, E. Theissen	Liquidity Dynamics in an Electronic Open Limit Order Book: An Event Study Approach
11-13	D. Hess, S. Orbe	Irrationality or Efficiency of Macroeconomic Survey Forecasts? Implications from the Anchoring Bias Test
11-12	D. Hess, P. Immenkötter	Optimal Leverage, its Benefits, and the Business Cycle
11-11	N. Heinrichs, D. Hess, C. Homburg, M. Lorenz, S. Sievers	Extended Dividend, Cash Flow and Residual Income Valuation Models – Accounting for Deviations from Ideal Conditions

11-10	A. Kempf, O. Korn, S. Saßning	Portfolio Optimization using Forward - Looking Information
11-09	V. Agarwal, S. Ray	Determinants and Implications of Fee Changes in the Hedge Fund Industry
11-08	G. Cici, L.-F. Palacios	On the Use of Options by Mutual Funds: Do They Know What They Are Doing?
11-07	V. Agarwal, G. D. Gay, L. Ling	Performance inconsistency in mutual funds: An investigation of window-dressing behavior
11-06	N. Hautsch, D. Hess, D. Veredas	The Impact of Macroeconomic News on Quote Adjustments, Noise, and Informational Volatility
11-05	G. Cici	The Prevalence of the Disposition Effect in Mutual Funds' Trades
11-04	S. Jank	Mutual Fund Flows, Expected Returns and the Real Economy
11-03	G.Fellner, E.Theissen	Short Sale Constraints, Divergence of Opinion and Asset Value: Evidence from the Laboratory
11-02	S.Jank	Are There Disadvantaged Clienteles in Mutual Funds?
11-01	V. Agarwal, C. Meneghetti	The Role of Hedge Funds as Primary Lenders

## 2010

No.	Author(s)	Title
10-20	G. Cici, S. Gibson, J.J. Merrick Jr.	Missing the Marks? Dispersion in Corporate Bond Valuations Across Mutual Funds
10-19	J. Hengelbrock, E. Theissen, C. Westheide	Market Response to Investor Sentiment
10-18	G. Cici, S. Gibson	The Performance of Corporate-Bond Mutual Funds: Evidence Based on Security-Level Holdings
10-17	D. Hess, D. Kreuzmann, O. Pucker	Projected Earnings Accuracy and the Profitability of Stock Recommendations
10-16	S. Jank, M. Wedow	Sturm und Drang in Money Market Funds: When Money Market Funds Cease to Be Narrow
10-15	G. Cici, A. Kempf, A. Puetz	The Valuation of Hedge Funds' Equity Positions
10-14	J. Grammig, S. Jank	Creative Destruction and Asset Prices
10-13	S. Jank, M. Wedow	Purchase and Redemption Decisions of Mutual Fund Investors and the Role of Fund Families
10-12	S. Artmann, P. Finter, A. Kempf, S. Koch, E. Theissen	The Cross-Section of German Stock Returns: New Data and New Evidence
10-11	M. Chesney, A. Kempf	The Value of Tradeability
10-10	S. Frey, P. Herbst	The Influence of Buy-side Analysts on Mutual Fund Trading
10-09	V. Agarwal, W. Jiang, Y. Tang, B. Yang	Uncovering Hedge Fund Skill from the Portfolio Holdings They Hide
10-08	V. Agarwal, V. Fos, W. Jiang	Inferring Reporting Biases in Hedge Fund Databases from Hedge Fund Equity Holdings

10-07	V. Agarwal, G. Bakshi, J. Huij	Do Higher-Moment Equity Risks Explain Hedge Fund Returns?
10-06	J. Grammig, F. J. Peter	Tell-Tale Tails: A data driven approach to estimate unique market information shares
10-05	K. Drachter, A. Kempf	Höhe, Struktur und Determinanten der Managervergütung- Eine Analyse der Fondsbranche in Deutschland
10-04	J. Fang, A. Kempf, M. Trapp	Fund Manager Allocation
10-03	P. Finter, A. Niessen- Ruenzi, S. Ruenzi	The Impact of Investor Sentiment on the German Stock Market
10-02	D. Hunter, E. Kandel, S. Kandel, R. Wermers	Mutual Fund Performance Evaluation with Active Peer Benchmarks
10-01	S. Artmann, P. Finter, A. Kempf	Determinants of Expected Stock Returns: Large Sample Evidence from the German Market

## 2009

No.	Author(s)	Title
09-17	E. Theissen	Price Discovery in Spot and Futures Markets: A Reconsideration
09-16	M. Trapp	Trading the Bond-CDS Basis – The Role of Credit Risk and Liquidity
09-15	A. Betzer, J. Gider, D.Metzger, E. Theissen	Strategic Trading and Trade Reporting by Corporate Insiders
09-14	A. Kempf, O. Korn, M. Uhrig-Homburg	The Term Structure of Illiquidity Premia
09-13	W. Bühler, M. Trapp	Time-Varying Credit Risk and Liquidity Premia in Bond and CDS Markets
09-12	W. Bühler, M. Trapp	Explaining the Bond-CDS Basis – The Role of Credit Risk and Liquidity
09-11	S. J. Taylor, P. K. Yadav, Y. Zhang	Cross-sectional analysis of risk-neutral skewness
09-10	A. Kempf, C. Merkle, A. Niessen-Ruenzi	Low Risk and High Return – Affective Attitudes and Stock Market Expectations
09-09	V. Fotak, V. Raman, P. K. Yadav	Naked Short Selling: The Emperor`s New Clothes?
09-08	F. Bardong, S.M. Bartram, P.K. Yadav	Informed Trading, Information Asymmetry and Pricing of Information Risk: Empirical Evidence from the NYSE
09-07	S. J. Taylor , P. K. Yadav, Y. Zhang	The information content of implied volatilities and model-free volatility expectations: Evidence from options written on individual stocks
09-06	S. Frey, P. Sandas	The Impact of Iceberg Orders in Limit Order Books
09-05	H. Beltran-Lopez, P. Giot, J. Grammig	Commonalities in the Order Book
09-04	J. Fang, S. Ruenzi	Rapid Trading bei deutschen Aktienfonds: Evidenz aus einer großen deutschen Fondsgesellschaft

09-03	A. Banegas, B. Gillen, A. Timmermann, R. Wermers	The Cross-Section of Conditional Mutual Fund Performance in European Stock Markets
09-02	J. Grammig, A. Schrimpf, M. Schuppli	Long-Horizon Consumption Risk and the Cross-Section of Returns: New Tests and International Evidence
09-01	O. Korn, P. Koziol	The Term Structure of Currency Hedge Ratios

## 2008

No.	Author(s)	Title
08-12	U. Bonenkamp, C. Homburg, A. Kempf	Fundamental Information in Technical Trading Strategies
08-11	O. Korn	Risk Management with Default-risky Forwards
08-10	J. Grammig, F.J. Peter	International Price Discovery in the Presence of Market Microstructure Effects
08-09	C. M. Kuhnen, A. Niessen	Public Opinion and Executive Compensation
08-08	A. Pütz, S. Ruenzi	Overconfidence among Professional Investors: Evidence from Mutual Fund Managers
08-07	P. Osthoff	What matters to SRI investors?
08-06	A. Betzer, E. Theissen	Sooner Or Later: Delays in Trade Reporting by Corporate Insiders
08-05	P. Linge, E. Theissen	Determinanten der Aktionärspräsenz auf Hauptversammlungen deutscher Aktiengesellschaften
08-04	N. Hautsch, D. Hess, C. Müller	Price Adjustment to News with Uncertain Precision
08-03	D. Hess, H. Huang, A. Niessen	How Do Commodity Futures Respond to Macroeconomic News?
08-02	R. Chakrabarti, W. Megginson, P. Yadav	Corporate Governance in India
08-01	C. Andres, E. Theissen	Setting a Fox to Keep the Geese - Does the Comply-or-Explain Principle Work?

## 2007

No.	Author(s)	Title
07-16	M. Bär, A. Niessen, S. Ruenzi	The Impact of Work Group Diversity on Performance: Large Sample Evidence from the Mutual Fund Industry
07-15	A. Niessen, S. Ruenzi	Political Connectedness and Firm Performance: Evidence From Germany
07-14	O. Korn	Hedging Price Risk when Payment Dates are Uncertain
07-13	A.Kempf, P. Osthoff	SRI Funds: Nomen est Omen
07-12	J. Grammig, E. Theissen, O. Wuensche	Time and Price Impact of a Trade: A Structural Approach
07-11	V. Agarwal, J. R. Kale	On the Relative Performance of Multi-Strategy and Funds of Hedge Funds
07-10	M. Kasch-Haroutounian, E. Theissen	Competition Between Exchanges: Euronext versus Xetra

07-09	V. Agarwal, N. D. Daniel, N. Y. Naik	Do hedge funds manage their reported returns?
07-08	N. C. Brown, K. D. Wei, R. Wermers	Analyst Recommendations, Mutual Fund Herding, and Overreaction in Stock Prices
07-07	A. Betzer, E. Theissen	Insider Trading and Corporate Governance: The Case of Germany
07-06	V. Agarwal, L. Wang	Transaction Costs and Value Premium
07-05	J. Grammig, A. Schrimpf	Asset Pricing with a Reference Level of Consumption: New Evidence from the Cross-Section of Stock Returns
07-04	V. Agarwal, N.M. Boyson, N.Y. Naik	Hedge Funds for retail investors? An examination of hedged mutual funds
07-03	D. Hess, A. Niessen	The Early News Catches the Attention: On the Relative Price Impact of Similar Economic Indicators
07-02	A. Kempf, S. Ruenzi, T. Thiele	Employment Risk, Compensation Incentives and Managerial Risk Taking - Evidence from the Mutual Fund Industry -
07-01	M. Hagemeister, A. Kempf	CAPM und erwartete Renditen: Eine Untersuchung auf Basis der Erwartung von Marktteilnehmern

## 2006

No.	Author(s)	Title
06-13	S. Čeljo-Hörhager, A. Niessen	How do Self-fulfilling Prophecies affect Financial Ratings? - An experimental study
06-12	R. Wermers, Y. Wu, J. Zechner	Portfolio Performance, Discount Dynamics, and the Turnover of Closed-End Fund Managers
06-11	U. v. Lilienfeld-Toal, S. Ruenzi	Why Managers Hold Shares of Their Firm: An Empirical Analysis
06-10	A. Kempf, P. Osthoff	The Effect of Socially Responsible Investing on Portfolio Performance
06-09	R. Wermers, T. Yao, J. Zhao	Extracting Stock Selection Information from Mutual Fund holdings: An Efficient Aggregation Approach
06-08	M. Hoffmann, B. Kempa	The Poole Analysis in the New Open Economy Macroeconomic Framework
06-07	K. Drachter, A. Kempf, M. Wagner	Decision Processes in German Mutual Fund Companies: Evidence from a Telephone Survey
06-06	J.P. Krahnert, F.A. Schmid, E. Theissen	Investment Performance and Market Share: A Study of the German Mutual Fund Industry
06-05	S. Ber, S. Ruenzi	On the Usability of Synthetic Measures of Mutual Fund Net- Flows
06-04	A. Kempf, D. Mayston	Liquidity Commonality Beyond Best Prices
06-03	O. Korn, C. Koziol	Bond Portfolio Optimization: A Risk-Return Approach
06-02	O. Scaillet, L. Barras, R. Wermers	False Discoveries in Mutual Fund Performance: Measuring Luck in Estimated Alphas
06-01	A. Niessen, S. Ruenzi	Sex Matters: Gender Differences in a Professional Setting

## 2005

No.	Author(s)	Title
05-16	E. Theissen	An Analysis of Private Investors' Stock Market Return Forecasts
05-15	T. Foucault, S. Moinas, E. Theissen	Does Anonymity Matter in Electronic Limit Order Markets
05-14	R. Kosowski, A. Timmermann, R. Wermers, H. White	Can Mutual Fund „Stars“ Really Pick Stocks? New Evidence from a Bootstrap Analysis
05-13	D. Avramov, R. Wermers	Investing in Mutual Funds when Returns are Predictable
05-12	K. Giese, A. Kempf	Liquiditätsdynamik am deutschen Aktienmarkt
05-11	S. Ber, A. Kempf, S. Ruenzi	Determinanten der Mittelzuflüsse bei deutschen Aktienfonds
05-10	M. Bär, A. Kempf, S. Ruenzi	Is a Team Different From the Sum of Its Parts? Evidence from Mutual Fund Managers
05-09	M. Hoffmann	Saving, Investment and the Net Foreign Asset Position
05-08	S. Ruenzi	Mutual Fund Growth in Standard and Specialist Market Segments
05-07	A. Kempf, S. Ruenzi	Status Quo Bias and the Number of Alternatives - An Empirical Illustration from the Mutual Fund Industry
05-06	J. Grammig, E. Theissen	Is Best Really Better? Internalization of Orders in an Open Limit Order Book
05-05	H. Beltran-Lopez, J. Grammig, A.J. Menkveld	Limit order books and trade informativeness
05-04	M. Hoffmann	Compensating Wages under different Exchange rate Regimes
05-03	M. Hoffmann	Fixed versus Flexible Exchange Rates: Evidence from Developing Countries
05-02	A. Kempf, C. Memmel	Estimating the Global Minimum Variance Portfolio
05-01	S. Frey, J. Grammig	Liquidity supply and adverse selection in a pure limit order book market

## 2004

No.	Author(s)	Title
04-10	N. Hautsch, D. Hess	Bayesian Learning in Financial Markets – Testing for the Relevance of Information Precision in Price Discovery
04-09	A. Kempf, K. Kreuzberg	Portfolio Disclosure, Portfolio Selection and Mutual Fund Performance Evaluation
04-08	N.F. Carline, S.C. Linn, P.K. Yadav	Operating performance changes associated with corporate mergers and the role of corporate governance
04-07	J.J. Merrick, Jr., N.Y. Naik, P.K. Yadav	Strategic Trading Behaviour and Price Distortion in a Manipulated Market: Anatomy of a Squeeze
04-06	N.Y. Naik, P.K. Yadav	Trading Costs of Public Investors with Obligatory and Voluntary Market-Making: Evidence from Market Reforms
04-05	A. Kempf, S. Ruenzi	Family Matters: Rankings Within Fund Families and Fund Inflows
04-04	V. Agarwal, N.D. Daniel, N.Y. Naik	Role of Managerial Incentives and Discretion in Hedge Fund Performance



04-03	V. Agarwal, W.H. Fung, J.C. Loon, N.Y. Naik	Risk and Return in Convertible Arbitrage: Evidence from the Convertible Bond Market
04-02	A. Kempf, S. Ruenzi	Tournaments in Mutual Fund Families
04-01	I. Chowdhury, M. Hoffmann, A. Schabert	Inflation Dynamics and the Cost Channel of Monetary Transmission



centre for financial research  
cfr/university of cologne  
albertus-magnus-platz  
D-50923 cologne  
fon +49(0)221-470-6995  
fax +49(0)221-470-3992  
kempf@cfr-cologne.de  
www.cfr-cologne.de