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How Does Forced-CEO-Turnover Experience Affect Directors?

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Abstract

We study changes in independent director behavior and labor-market outcomes after the experience of a forced Chief Executive Officer (CEO) turnover. We find that independent directors are more willing to fire CEOs of underperforming firms, hire outside CEOs after a firing, and encourage better board-meeting attendance by fellow directors. We also find that the shareholders of poorly performing firms react positively when experienced directors join the board. It does come with a small cost for directors, in terms of additional directorships, although the cost is not as great as that for directors who do not fire the CEO of a poorly performing firm.

I. Introduction

One of the most important tasks of the board of directors is the firing and hiring of Chief Executive Officers (CEOs). As such, there is a large literature devoted to understanding boards' CEO-turnover decisions. Prior articles have focused primarily on how preexisting director attributes affect CEO-turnover decisions. This article, however, focuses on how experiencing a forced CEO turnover can affect directors. A vast literature in economics and psychology finds that experience can

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have an especially strong impact on one's subsequent behavior.[1] Given the importance and complexity of CEO-turnover events, working through a forced CEO turnover for the first time represents a significant learning experience for directors that can potentially transform their subsequent decisions on forced CEO turnovers. Yet, few studies have been published on whether major board events, such as forced CEO turnovers, transform directors.

We begin by examining whether an experience with forced CEO turnover changes key aspects of directors' subsequent monitoring of CEOs. First, we explore the sensitivity of forced CEO turnover to firm performance to see if prior experience affects how quickly directors decide to dismiss the CEO of a poorly performing firm. Second, we examine board-meeting attendance to see how prior experience by a director can affect other directors' monitoring efforts and thus affect subsequent forced CEO turnovers. Third, we study whether prior experience alters directors' willingness to hire an outside CEO after a forced CEO turnover, which is often viewed as a risker option relative to hiring an insider.

We then address the important question of whether shareholders recognize that directors learn from their prior experience with forced CEO turnovers. To do so, we conduct an event study around director-appointment announcements to see if shareholders, particularly those of poorly performing firms, recognize that experienced directors are more skilled at managing forced CEO turnovers than are inexperienced directors. Lastly, we examine the effect of the experience of forced CEO turnovers on directors' future appointments.

To study director learning through forced-CEO-turnover events, we identify all forced CEO turnovers in Standard & Poor's (S&P) 1500 firms from 1997 to 2017, and we simultaneously identify the independent directors who were involved in each turnover. We then compare various aspects of forced-CEO-turnover decisions in firms with and without directors who have acquired prior turnover experience in another firm.

A priori, a forced-CEO-turnover experience acquired by a director can either strengthen or weaken the director's effectiveness in managing subsequent forced-CEO-turnover events. On the one hand, working through a forced CEO turnover allows a director to gain direct knowledge about the process and acquire important new skills. For example, directors can learn how to better assess a CEO's ability, form coalitions among board members, find a replacement, and work with various groups to reduce disruptions to the firm during the process. Having a director with such knowledge and skill can help a board to respond more effectively to a CEO of a poorly performing firm.

On the other hand, forced CEO turnovers could be an unpleasant experience for directors, and greater knowledge of the process may only serve to discourage directors from initiating subsequent forced CEO turnovers. When experienced directors then share such knowledge and sentiment with other board members, this can impede the board's response to poor performance. Lastly, because forced CEO turnovers can vary across firms, the skills or knowledge gained in one firm may not

[1] See, for example, in economics, Arrow (1962), Grossman, Kihlstrom, and Mirman (1977), Cross (1973), Arthur (1991), and Roth and Erev (1995), and in psychology, see Fazio, Zanna, and Cooper (1978) and Nisbett and Ross (1980).

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be readily transferable to another. If so, experience could have little impact on future decisions on forced CEO turnovers. Ultimately, the net effect of a forced-CEO-turnover experience on subsequent forced-CEO-turnover decisions in a director's other directorships is an empirical question.

Our first set of tests examines the sensitivity of forced CEO turnover to firm performance. We find that when there is at least one experienced (EXPERIENCED) director on the board, forced CEO turnovers are statistically and economically more sensitive to firm stock performance. For an interquartile drop in stock returns, the associated increase in forced-turnover probability is 3.14 times larger for firms with an experienced director on the board. These results are robust to the inclusion of a variety of controls and fixed effects, including director fixed effects, suggesting that our results are not due to differences in directors' innate characteristics.

To address the concern of endogenous selection of directors with turnover experience by firms that intend to fire their CEO (Fee, Hadlock, and Pierce (2013)), we exploit the fact that directors often simultaneously hold multiple directorships, giving them an opportunity to acquire experience at another firm after joining the focal board. By focusing on independent directors who became experienced after joining (EXPERIENCED_AFTER_JOINING), we can rule out the firm-selection story in favor of a causal interpretation of the relation between experienced directors and forced-CEO-turnover sensitivity to firm performance. We find similar results using this more restrictive measure of experience.

We then explore cross-sectional variations in the relevance of the experience to the current CEO-turnover decision to see if the difference in the sensitivity of forced CEO turnover to firm performance is due to learning. If it is due to director learning, prior CEO-turnover experience should have a stronger effect in firms that are more similar to the firm where the director acquired the initial experience. To measure firm similarity, we employ cluster analysis based on several important firm characteristics: firm size (market capitalization), sales growth, Tobin's Q, and profitability (operating return on assets (ROA)).[2] We find that experience from a similar firm (i.e., in the same cluster) significantly increases forced-CEO-turnover sensitivity to performance. However, experience from a dissimilar firm has an insignificant effect. This evidence is consistent with a learning explanation and further helps to refute the alternative explanation based on innate differences among directors. If experience only reflects a director's innate strictness, then we would expect directors to apply the same strictness more or less equally across all other directorships.

Next, we examine board-meeting attendance and consider whether boards with independent directors with prior forced-CEO-turnover experience act differently from boards without such directors in a way that can affect CEO-turnover decisions. Anecdotal evidence suggests that independent directors often discuss CEO dismissal in exclusive or informal meetings around the formal board meetings

[2]Because the Clayton Act of 1914 prohibits directors from sitting on the board of direct competitors, we rarely observe directors acquiring turnover experience from firms in the same industry. Hence, we use cluster analysis.

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they attend.[3] Better meeting attendance by all directors, therefore, facilitates more information sharing, which should improve the board's ability to ascertain CEO quality. If directors learn this through experience, the boards where they subsequently serve should reflect this improved attendance. We find that this is indeed the case. The presence of an experienced director on a board is associated with significantly better board meeting attendance by fellow independent directors.

The next change in board behavior we examine is new CEO appointments. Specifically, we examine the likelihood that the board hires the new CEO from outside versus inside the firm after a forced CEO turnover. It is well documented in the CEO-turnover literature that an outside CEO often brings bigger changes to a struggling firm than an inside CEO does (Parrino (1997), Eisfeldt and Kuhnen (2013)). However, hiring an outsider is often risker than hiring an insider because directors typically know much less about an outsider than an insider. Through prior forced-CEO-turnover experience, however, directors can become better at evaluating a new CEO's ability and more confident in managing the risk, and thus they may be more willing to hire an outside CEO. Consistent with this, we find that boards with experienced directors are significantly more likely to hire an outside CEO than boards without experienced directors.

Next, we conduct an event study of experienced director appointments to the board to investigate whether shareholders appreciate directors' forced CEO turnover experience. We find that the shareholders of poorly performing firms react significantly more favorably to announcements of experienced, rather than inexperienced, director appointments. This evidence is consistent with the market recognizing that directors learn from their prior forced-CEO-turnover experience, which adds value to their services.

Lastly, we study whether the director labor market rewards directors for acquiring forced-CEO-turnover experience. Whereas shareholders may value, and thus reward, directors who are stronger monitors (Fama and Jensen (1983)), CEOs generally do not. Because CEOs can also influence director nominations (e.g., Hermalin and Weisbach (1998), Shivdasani and Yermack (1999), Coles, Daniels, and Naveen (2014), and Jiang, Wan, and Zhao (2016)), turnover experience may actually reduce the demand for a director's service by firms with a powerful CEO. Although we find no evidence that experienced directors are more likely to lose existing directorships, we do find that experienced directors are significantly less likely to gain additional directorships. Furthermore, we find that firms with a more powerful CEO are less likely to appoint directors with prior forced-CEO-turnover experience.

Because directors who fire a CEO are also often associated with a poorly performing firm, to study labor-market outcomes we create a matched set of control directors who are also associated with poorly performing firms but who do not fire their CEOs. We find that both sets of directors experience a reduction in future

[3]For example, according to a *Wall Street Journal* report, in the ousting of General Electric's CEO John Flannery, announced on Oct. 1, 2018, the board approached Lawrence Culp after a board meeting and inquired of his willingness to take the job. Furthermore, after the passage of the Sarbanes–Oxley Act in 2002, major exchanges in the United States all issued new listing requirements that require nonmanagement directors to meet regularly without the presence of the management.

directorships, but the reduction is smaller for directors of boards who fire their CEOs. We also find that the reduction in directorships for experienced directors is more concentrated in their less prestigious directorships than it is for control directors, suggesting the reduction is partially supply driven. Hence, although the labor market does not provide an absolute reward to directors who gain forced CEO turnover experience, ex post settling up in this market still provides incentives for directors to fire CEOs when firm performance is weak.

The remainder of the article proceeds as follows: A discussion of the related literature and contributions is in Section II. Section III discusses the sample and descriptive statistics. Section IV reports the results from our forced-CEO-turnover analysis. Section V reports results from our labor-market analysis. Section VI concludes.

II. Related Literature and Contributions

In addition to an earlier literature in economics and psychology, recent literature in accounting and finance finds that experience leads to important changes in decision making by people in a variety of roles or positions. Examples include decision making by investors (Kaustia and Knupfer (2008), Seru, Shumway, and Stoffman (2009), and Chiang, Hirshleifer, Qian, and Sherman (2011)), corporate executives (Dittmar and Duchin (2016)), analysts (Mikhail, Walther, and Willis (1997), (2003)), fund managers (Kempf, Manconi, and Spalt (2016)), and judges (Iverson, Madsen, Wang, and Xu (2018)). Our study extends this literature by showing that directors' incentives and skills develop through experience with major board decisions.

This new perspective complements a large existing literature on boards of directors that emphasizes the importance of preexisting director attributes for board monitoring and advising, such as whether the director is an outsider (e.g., Weisbach (1988), Dahya, McConnell, and Travlos (2002), and Guo and Masulis (2015)), has industry expertise (e.g., Dass, Kini, Nanda, Onal, and Wang (2014), Wang, Xie, and Zhu (2015), and Ellis, Fee, and Thomas (2018)), has financial expertise (e.g., Defond, Hann, and Hu (2005), Guner, Malmendier, and Tate (2008), and Huang, Jiang, Lie, and Yang (2014)), has foreign experience (e.g., Giannetti, Liao, and Yu (2015)), or has ties to the CEO (Hwang and Kim (2009), Fracassi and Tate (2012), and Coles et al. (2014)). Similar to our study, Cai and Nguyen (2018) examine firms that hire directors with preexisting CEO-dismissal experience; however, their focus is on how this preexisting director attribute is related to firm risk taking. Most importantly, they are agnostic about whether prior forced-CEO-turnover experience changes directors. An important takeaway from our findings is that shareholders should expect directors' monitoring skills and actions to evolve as they experience and learn from significant boardroom events.

We also provide new and contrasting evidence on how the director labor market rewards experience. Existing studies find that directors are rewarded for experiences related to the advising function of the board (e.g., Harford and Schonlau (2013), Field and Mkrtchyan (2017)). In contrast, we find that the director labor market does not reward directors in absolute terms for their experiences related to the monitoring function of the board, partly because CEOs resist the appointment of

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such directors. However, the ex post settling up in the labor market still rewards directors who choose to remove CEOs of poorly performing firms relative to those who choose not to do so.

III. Sample and Descriptive Statistics

Our primary data are from the RiskMetrics director database, which contains director information for the largest 1,500 public firms each year. The sample period is 1997–2017. We create a CEO-turnover database by capturing changes in the identity of the CEO from the prior year within the ExecuComp database and merge these turnovers with director data. We use the Center for Research in Security Prices (CRSP) and Compustat for firm stock return and accounting data. Our final sample is the intersection of these various data sources. Within the sample of CEO turnovers, we identify 699 as forced based on our reading of press releases using Factiva. A CEO turnover is considered to be forced when the press release directly mentions that the CEO departure was forced (17%); the CEO was under 60 years old and the news did not mention another job acceptance, poor health, or death as the cause of the CEO departure (64%); or the CEO was said to be retiring, but the retirement was not announced at least 6 months prior to the departure press release (20%) (Parrino (1997), Huson, Malatesta, and Parrino (2004), Hazarika, Karpoff, and Nahata (2012), Guo and Masulis (2015), and Jenter and Kanaan (2015)). Panel A of Table 1 reports the annual distribution and categorization of forced CEO turnovers in our sample.

Our primary variable of interest is an indicator, EXPERIENCED, which, in director-level analysis, equals 1 if the independent director being studied has prior experience with a forced CEO turnover in another firm, and 0 otherwise, and in firm-level analysis, it equals 1 if the board has at least one such director, and 0 otherwise. To address the endogenous self-selection issues, we also examine independent directors who acquire forced-CEO-turnover experience after joining the board of the firm of interest and classify these directors as EXPERIENCED_AFTER_JOINING. Our classification algorithm works as follows: If an independent director of firm A is inexperienced with respect to forced CEO turnover when joining the board of firm A[4] and simultaneously is an independent director of another firm, firm B, that subsequently experiences a forced CEO turnover event in year t, we consider the director to be EXPERIENCED_AFTER_JOINING in years $t+1$ and beyond in firm A and set the variable to 1, and 0 otherwise. We do not consider the years in firm B, after year t, to be experienced to avoid the endogeneity issues stemming from the previous turnover decision (e.g., the director's role in selecting the replacement CEO could affect a director's decision to subsequently remove that CEO). However, our results are not sensitive to this exclusion.

[4]Because we do not observe CEO turnover experience gained prior to our sample period or those in private or non-S&P 1500 firms, we may misclassify some experienced directors as inexperienced. These misclassifications work against finding an experience effect. Also, because CEO turnover decisions are very different in private firms (Gao, Harford, and Li (2017)) and we study turnovers in S&P 1500 firms, experience gained in S&P 1500 firms is the most relevant.

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TABLE 1

Descriptive Statistics

Table 1 reports firm-level descriptive statistics. Panel A reports the distribution of the forced Chief Executive Officer (CEO) turnovers identified in our sample and the reason for their classification. Panel B reports sample firm characteristics. The sample period is from 1997 to 2017. EXPERIENCED_AFTER_JOINING is an indicator variable that equals 1 if the firm has at least one director who is independent and has prior forced-CEO-turnover experience that was acquired in another firm in the sample (after the director had joined the current firm), and 0 otherwise. STOCK_RETURN is the annual total stock return. ROA is earnings before interest, taxes, depreciation, and amortization (EBITDA) scaled by total assets. FORCED_CEO_TURNOVER equals 1 if a forced CEO turnover is announced in that firm-year, and 0 otherwise. TOBIN_Q is calculated as the book value of debt plus the market value of equity divided by total assets each year. INST_OWNERSHIP_RATIO is the fraction of shares owned by institutional investors. SALES_GROWTH is the change in sales over the last 3 years. PERCENT_INDEPENDENT_DIRECTORS equals the percentage of independent directors on the board. BOARD_SIZE is the number of directors on the board. BUSY_BOARD equals 1 if a majority of independent directors hold three or more outside board seats, and 0 otherwise. CEO_TENURE equals the number of years the CEO has been in office. CEO_CHAIR_DUALITY equals 1 if the CEO is also the chair of the board, and 0 otherwise, each year. CEO_OWNERSHIP is the fraction of outstanding shares owned by the CEO. CEO_POWER_INDEX is computed as the first principal component of CEO_OWNERSHIP, CEO_BOARD_TENURE, and CEO_CHAIR_DUALITY. All variables are defined in the Appendix.

Panel A. Annual Distribution of Forced CEO Turnover

Year	No. of Forced Turnovers	News Articles Mention Forced (Resigned)	CEO < 60 and No Other Job, Health, or Death	CEO "Retiring" but No Announcement 6 Months Prior
1997	33	0.11	0.63	0.26
1998	41	0.02	0.64	0.34
1999	45	0.11	0.74	0.15
2000	62	0.12	0.65	0.23
2001	27	0.10	0.71	0.19
2002	31	0.15	0.68	0.18
2003	38	0.21	0.53	0.26
2004	33	0.09	0.71	0.21
2005	31	0.12	0.50	0.38
2006	35	0.17	0.57	0.27
2007	27	0.39	0.52	0.09
2008	17	0.24	0.53	0.24
2009	11	0.06	0.78	0.17
2010	15	0.08	0.69	0.23
2011	21	0.19	0.48	0.33
2012	27	0.44	0.52	0.04
2013	34	0.21	0.65	0.15
2014	30	0.20	0.67	0.13
2015	41	0.12	0.88	0.00
2016	45	0.18	0.67	0.16
2017	55	0.22	0.67	0.11
	699	0.17	0.64	0.20

Panel B. Firm Characteristics

Firm Characteristics	*N*	Mean	Median	Std. Dev.
EXPERIENCED	29,166	0.33	0.00	0.47
EXPERIENCED_AFTER_JOINING	29,166	0.17	0.00	0.38
STOCK_RETURN	26,966	0.19	0.12	0.61
ROA	28,012	0.15	0.14	0.14
FORCED_CEO_TURNOVER	27,868	0.03	0.00	0.16
ASSETS ($millions)	29,209	17,386.50	2,157.82	96,752.69
SALES ($millions)	29,206	6,360.46	1,441.25	19,855.82
MARKET_CAP ($millions)	29,204	9,580.00	1,940.00	30,300.00
TOBIN_Q	29,162	1.99	1.51	1.77
INST_OWNERSHIP_RATIO	29,211	0.69	0.74	0.27
SALES_GROWTH	28,971	0.11	0.07	0.23
PERCENT_INDEPENDENT_DIRECTORS	29,174	72.73	75.00	16.12
BOARD_SIZE	29,211	9.43	9.00	2.63
BUSY_BOARD	29,211	0.04	0.00	0.19
CEO_TENURE	28,953	10.67	8.00	9.33
CEO_CHAIR_DUALITY	29,211	0.56	1.00	0.50
CEO_OWNERSHIP	27,750	0.03	0.01	0.07
CEO_POWER_INDEX	27,720	0.00	−0.02	1.00

Because the process of forcefully removing a CEO of a poorly performing firm can vary widely across firms, the lessons that directors learn from past forced-CEO-turnover events are likely to be more relevant to circumstances that more closely

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mirror those of their initial experience. To test this conjecture, we group firms into clusters based on their similarities in size, growth opportunities, and profitability. Specifically, we use *k*-means cluster analysis to group each firm-year observation into one of *k* different clusters, where the members of a cluster are similar along the dimensions of firm size (market capitalization), sales growth, Tobin's Q, and profitability (operating ROA). We standardize each variable according to its cross-sectional distribution by year to avoid capturing any time trends in the variables. This clustering approach aims to minimize the differences between observations within each cluster while maximizing the differences across the clusters. We use the Calinski–Harabasz (1974) procedure and find the optimal number of clusters in the data to be 4. In roughly two-thirds of the firms with an experienced director on the board, the experienced directors acquired their initial experience in a similar firm (i.e., the same cluster). We examine the differential effects of having experience from a similar firm as opposed to a dissimilar firm throughout the article.

Panel B of Table 1 reports firm-level descriptive statistics. In our sample, 33% of firm-years have at least one EXPERIENCED director, and 17% have at least one EXPERIENCED_AFTER_JOINING director. Forced CEO turnovers occur in approximately 3% of all firm-years. The mean (median) board has 9.43 (9.00) directors, and 72.73% (75%) of them are independent.

IV. Learning from Forced-CEO-Turnover Experience

A. Forced-CEO-Turnover Sensitivity to Performance

A large corporate governance literature considers forced-CEO-turnover sensitivity to performance an important measure of the quality of internal governance.[5] Hence, we first examine how forced-CEO-turnover experience affects this sensitivity.

1. Board-Level Analysis

In Table 2, we estimate linear probability models that predict the likelihood of forced CEO turnover.[6] The dependent variable is an indicator for forced CEO turnover announced in year *t*, and the key independent variables are firm performance and the interaction between firm performance, measured in year $t-1$, and an indicator for the presence of experienced independent directors on the board. We use the firm's trailing annual stock return as our performance metric because it fully capitalizes the future value effects of a CEO's performance.

We also control for other time-varying firm, CEO, and board characteristics that could relate to the likelihood of a forced CEO departure. We control for the

[5]See, for example, Vancil (1987), Weisbach (1988), Warner, Watts, and Wruck (1988), Yermack (1996), Parrino (1997), Denis, Denis, and Sarin (1997), Huson, Parrino, and Starks (2001), Dahya et al. (2002), Fee and Hadlock (2003), Hermalin and Weisbach (2003), Huson et al. (2004), Lel and Miller (2008), Fahlenbrach, Minton, and Pan (2011), Kaplan and Minton (2011), Mobbs (2013), Coles et al. (2014), Jenter and Lewellen (2014), Guo and Masulis (2015), and Fos, Li, and Tsoutsoura (2018).

[6]We rely on linear probability models for ease of interpretation of our main variable of interest, which is an interaction effect (see Cornelli, Kominek, and Ljungqvist (2013), Guo and Masulis (2015)). In nonlinear models, this effect must be calculated separately. That said, our results are similar when we use conditional logit models.

TABLE 2

Experienced Directors and Forced CEO Turnovers

Table 2 reports the results of firm-level regression analyses of forced Chief Executive Officer (CEO) departures using linear probability models. EXPERIENCED_AFTER_JOINING equals 1 if at least one of the directors on the board is independent and has experienced a forced CEO turnover in another firm (after joining the board of this firm), and 0 otherwise. In the model using EXPERIENCED_AFTER_JOINING, we exclude observations with experienced directors who joined the board after acquiring their experience. EXPERIENCED_IN_SAME(DIFFERENT)_CLUSTER equals 1 if at least one of the directors on the board is independent and has experienced a forced CEO turnover in another firm and this firm is in the same (different) cluster as the firm where the initial experience was acquired, and 0 otherwise. All models incorporate industry or firm and year fixed effects and use robust standard errors (White (1980)) clustered by firm. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. Variable definitions are in the Appendix. *, **, and *** indicate statistical significance at the 10%, 5%, and 10% levels, respectively.

Dependent Variable: FORCED_CEO_TURNOVER (1/0)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
EXPERIENCED	0.0036 (0.15)			0.01*** (<.01)		
EXPERIENCED_AFTER_JOINING		0.002 (0.51)			0.006 (0.24)	
EXPERIENCED_IN_SAME_CLUSTER			0.0059** (0.040)			0.012*** (<.01)
EXPERIENCED_IN_DIFFERENT_CLUSTER			0.003 (0.36)			0.006 (0.16)
STOCK_RETURN	−0.007*** (<.01)	−0.007*** (<.01)	−0.008*** (<.01)	−0.006*** (<.01)	−0.006*** (<.01)	−0.007*** (<.01)
EXPERIENCED × STOCK_RETURN	−0.015*** (<.01)			−0.016*** (<.01)		
EXPERIENCED_AFTER_JOINING × STOCK_RETURN		−0.016*** (<.01)			−0.019*** (<.01)	
EXPERIENCED_IN_SAME_CLUSTER × STOCK_RETURN			−0.022*** (<.01)			−0.025*** (<.01)
EXPERIENCED_IN_DIFFERENT_CLUSTER × STOCK_RETURN			−0.006 (0.22)			−0.007 (0.22)
CEO_OWNERSHIP	0.028** (0.01)	0.027** (0.03)	0.031*** (<.01)	0.05** (0.02)	0.057** (0.02)	0.05** (0.03)
ln(CEO_TENURE)	−0.0323*** (<.01)	−0.0321*** (<.01)	−0.0324*** (<.01)	−0.031*** (<.01)	−0.032*** (<.01)	−0.031*** (<.01)
CEO_CHAIR_DUALITY	−0.004* (0.06)	−0.003 (0.23)	−0.003* (0.09)	−0.001 (0.75)	−0.001 (0.85)	−0.001 (0.86)
BOARD_SIZE	−0.002*** (<.01)	−0.002*** (<.01)	−0.002*** (<.01)	−0.002*** (<.01)	−0.003*** (<.01)	−0.002*** (<.01)
BUSY_BOARD	−0.006 (0.29)	−0.016** (0.01)	−0.006 (0.3)	0.001 (0.94)	−0.01 (0.21)	0.002 (0.8)
ln(SALES)	0.001 (0.57)	0.001 (0.33)	0.001 (0.47)	0.009*** (<.01)	0.012*** (<.01)	0.008** (0.01)
TOBIN_Q	−0.004*** (<.01)	−0.004*** (<.01)	−0.004*** (<.01)	−0.003*** (<.01)	−0.003*** (<.01)	−0.004*** (<.01)
INST_OWNERSHIP_RATIO	−0.008 (0.1)	−0.012** (0.03)	−0.008 (0.12)	−0.011 (0.17)	−0.017* (0.05)	−0.013 (0.11)
SALES_GROWTH	−0.029*** (<.01)	−0.028*** (<.01)	−0.005*** (<.01)	−0.028*** (<.01)	−0.028*** (<.01)	−0.005*** (<.01)
No. of obs. Adj. R^2	26711 4.21%	22174 4.21%	26196 4.14%	26322 5.99%	21736 5.96%	25832 5.80%
Fixed effects	Industry/year	Industry/year	Industry/year	Firm/year	Firm/year	Firm/year

degree of influence of the incumbent CEO with CEO ownership, tenure, and an indicator for whether the CEO is also the board chair. We control for general board-monitoring intensity with board size and an indicator for a busy board, which is defined as a board with a majority of the independent directors holding three or

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more directorships.[7] We control for monitoring by institutional investors with their percentage ownership in the firm. We control for firm size with the natural logarithm of total sales, growth opportunities or firm value with Tobin's Q, and recent growth with the 3-year change in sales. To account for unobserved heterogeneity in CEO-turnover patterns across industries, we include Fama–French (1993) 48-industry fixed effects in models 1–3. In models 4–6, we incorporate firm fixed effects to control for unobserved heterogeneity in firm characteristics that may be simultaneously correlated with the presence of experienced directors and CEO turnover decisions. Both sets of models include year fixed effects and use robust standard errors clustered by firm.[8]

In model 1, the stock return coefficient is significantly negative, consistent with the negative relation between CEO-turnover likelihood and firm performance documented in the existing CEO-turnover literature. The coefficient estimate for the presence of experienced directors is not significantly different from 0. However, our primary interest is in how experienced directors affect the sensitivity of forced CEO turnover to firm stock performance. The coefficient estimate for the interaction EXPERIENCED $\times$ STOCK_RETURN is negative and statistically significant, with a p-value of < 0.01, meaning that boards with experienced directors are associated with greater CEO-turnover sensitivity to performance. Our estimates also imply a significant economic effect. For example, using coefficient estimates from model 1, relative to the unconditional likelihood of forced CEO turnover, the estimated likelihood of a forced CEO turnover increases by 12.44% when firm stock performance drops from the top quartile to the bottom quartile of the sample (a drop in annual stock return of 0.45) in firms without any experienced directors. However, the same drop in stock performance is associated with a 39.10% increase in the estimated likelihood of forced CEO turnover in firms with at least one experienced director on the board, a much more performance-sensitive turnover decision. In model 2, we focus on directors with experience after joining to address the concern of endogenous selection of experienced directors to a board. We find that the interaction EXPERIENCED_AFTER_JOINING $\times$ STOCK_RETURN is negative and statistically significant, with a p-value of < 0.01, suggesting the relation is not driven by firm-selection effects. These results suggest that having a director on the board who has experienced a forced CEO turnover in the past makes the board more likely to remove CEOs of poorly performing firms.

In model 3, we examine whether the results in models 1 and 2 vary with the relevance of directors' prior forced-CEO-turnover experience to the current firm. Specifically, we test for differences in the forced-CEO-turnover sensitivity to performance for directors who acquired their experience from similar firms (same cluster) versus those who acquired their experience from dissimilar firms (different cluster). We find that firms with experienced directors who acquired their initial

[7]In unreported results, we also control for the percentage of independent directors on the board and its interaction with firm performance. We find that the coefficient estimate for our primary variable of interest, the interaction between the presence of experienced directors and firm performance, continues to be negative and significant (p-value < 0.01).

[8]Our results are also unaffected if we control for time trends in CEO turnover with an explicit time trend variable rather than year dummies, or when we cluster our standard errors by time.

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experience in a similar firm are associated with significantly greater forced-CEO-turnover sensitivity to performance than are firms without any experienced directors. However, firms with experienced directors who gained their initial experience in a dissimilar firm do not exhibit greater forced-CEO-turnover sensitivity to performance compared with firms without any experienced directors. An *F*-test of the equality of the coefficients of these two interaction terms reveals a statistically significant difference (p-value = 0.02) in forced-CEO-turnover sensitivity to performance between experienced directors who acquired their initial experience in a similar versus a dissimilar firm. These results are consistent with forced-CEO-turnover experience being most relevant in directorships of similar firms. This is important because it supports the notion that the effects we document are due to directors learning from prior experience, rather than reflecting innate director qualities, such as strictness of monitoring. If we were merely picking up stricter monitors, we would expect experienced directors to exhibit similar effects in all of their directorships.

In models 4–6, we repeat the previous analysis using firm and year fixed effects. We find that the results remain statistically significant. In unreported results, we also replace firm stock return with firm ROA as the firm-performance measure and rerun models 4–6. We find similar results on the effect of experienced directors on forced-CEO-turnover sensitivity to performance.

2. Director-Level Analysis

To further address the concern that the results in Table 2 could reflect innate director differences rather than learning, we rerun our CEO-turnover regressions at the director-firm-year level and incorporate director fixed effects in Table 3. This approach should mitigate the concern that correlations between unobservable heterogeneity across directors, such as their propensity to fire a CEO, and the independent variables in our regression could bias the coefficient estimate on our main variable of interest. In addition to time-invariant differences among directors, a director's monitoring ability or incentives may also change with time-varying director characteristics. Hence, in addition to the same firm-level controls used in Table 2, we also control for director age, ownership, tenure, and the number of directorships held. Models 1–3 of Table 3 correspond to the same sequence as those in models 1–3 of Table 2, but at the director level, and we find very similar results when incorporating director fixed effects.

We note that in these director-level fixed-effect models, the coefficient on the experience indicator itself (main effect) is negative and statistically significant, in contrast to the insignificant or sometimes positive and significant coefficient estimates for the firm-level regressions in Table 2. This outcome is essentially mechanical because the within-director regressions of Table 3 compare the incidence of forced turnovers per year for directors when they are inexperienced to when they are experienced. However, the first experience, by definition, happens when the directors are inexperienced. Thus, the incidence rate for experienced directors is much lower than their pre-experience rate by construction, given that we define the pre-experience period to include at least one turnover, and the post-experience period may have 0.

TABLE 3

Director-Firm-Year-Level Regressions in Full Sample and Subsample

Table 3 reports the results of regression analyses of forced Chief Executive Officer (CEO) departures at the director-firm-year level using linear probability models. The sample used in models 1–3 consists of director-firm-years for independent directors from 1997 to 2017. The sample used in models 4–6 is restricted to director-firm-years from 1997 to 2017 for independent directors who experienced two or more forced CEO turnovers during the period. The dependent variable equals 1 in a director-firm-year with a forced CEO turnover, and 0 otherwise. EXPERIENCED_AFTER_JOINING equals 1 if the independent director has prior experience with a forced turnover in another firm (after joining the board of this firm). In the models using EXPERIENCED_AFTER_JOINING, we exclude observations with experienced directors who joined the board after acquiring their experience. EXPERIENCED_IN_SAME(DIFFERENT)_CLUSTER equals 1 if the director is independent and has experienced a forced CEO turnover in another firm and this firm is in the same (different) cluster as the firm where the initial experience was acquired, and 0 otherwise. All other variables are defined in the Appendix. All models incorporate year and director fixed effects and robust standard errors (White (1980)) clustered by director, and the corresponding *p*-values are reported in parentheses beneath each coefficient estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variable: FORCED_CEO_TURNOVER (1/0)	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
EXPERIENCED	−0.0812*** (<.01)			0.00002 (1.00)		
EXPERIENCED_AFTER_JOINING		−0.094*** (<.01)			−0.023 (0.12)	
EXPERIENCED_IN_SAME_CLUSTER			−0.0783*** (<.01)			0.003 (0.72)
EXPERIENCED_IN_DIFFERENT_CLUSTER			−0.08*** (<.01)			−0.011 (0.27)
STOCK_RETURN	−0.009*** (<.01)	−0.008*** (<.01)	−0.009*** (<.01)	−0.023** (0.04)	−0.02* (0.06)	−0.026** (0.01)
EXPERIENCED × STOCK_RETURN	−0.013*** (<.01)			−0.031** (0.02)		
EXPERIENCED_AFTER_JOINING × STOCK_RETURN		−0.019*** (<.01)			−0.045*** (<.01)	
EXPERIENCED_IN_SAME_CLUSTER × STOCK_RETURN			−0.021*** (<.01)			−0.036** (0.02)
EXPERIENCED_IN_DIFFERENT_CLUSTER × STOCK_RETURN			−0.004 (0.40)			−0.012 (0.47)
ln(AGE)	−0.013 (0.46)	−0.024 (0.26)	−0.014 (0.42)	−0.04 (0.81)	0.01 (0.96)	−0.037 (0.82)
OWNERSHIP	0.0808 (0.16)	0.1022 (0.14)	0.0822 (0.15)	1.212 (0.13)	1.439 (0.14)	1.233 (0.12)
NUM_DIRECTORSHIPS	−0.0003 (0.7)	0 (0.67)	−0.0003 (0.72)	0.001 (0.72)	−0.002 (0.68)	0.001 (0.71)
ln(BOARD_TENURE)	−0.007*** (<.01)	−0.0109*** (<.01)	−0.0064*** (<.01)	−0.018*** (<.01)	−0.03*** (<.01)	−0.018*** (<.01)
CEO_OWNERSHIP	0.054*** (<.01)	0.056*** (<.01)	0.053*** (<.01)	0.195*** (<.01)	0.243*** (<.01)	0.189*** (<.01)
ln(CEO_TENURE)	−0.0289*** (<.01)	−0.0285*** (<.01)	−0.0291*** (<.01)	−0.091*** (<.01)	−0.086*** (<.01)	−0.091*** (<.01)
CEO_CHAIR_DUALITY	−0.003** (0.01)	−0.004*** (<.01)	−0.003** (0.01)	0.008 (0.33)	−0.005 (0.65)	0.007 (0.34)
BOARD_SIZE	−0.002*** (<.01)	−0.003*** (<.01)	−0.002*** (<.01)	−0.004*** (<.01)	−0.005*** (<.01)	−0.004*** (<.01)
BUSY_BOARD	−0.003 (0.14)	−0.016*** (<.01)	−0.004 (0.14)	−0.003 (0.78)	−0.026* (0.06)	−0.004 (0.75)
ln(SALES)	0.002*** (<.01)	0.003*** (<.01)	0.002*** (<.01)	0.004 (0.17)	0.005 (0.18)	0.004 (0.13)
TOBIN_Q	−0.004*** (<.01)	−0.003*** (<.01)	−0.004*** (<.01)	−0.009*** (<.01)	−0.009*** (<.01)	−0.009*** (<.01)
INST_OWNERSHIP_RATIO	−0.008*** (<.01)	−0.01*** (<.01)	−0.008*** (<.01)	−0.025 (0.12)	−0.031 (0.11)	−0.025 (0.12)
SALES_GROWTH	−0.025*** (<.01)	−0.024*** (<.01)	−0.025*** (<.01)	−0.094*** (<.01)	−0.101*** (<.01)	−0.093*** (<.01)
No. of obs.	173,875	140,144	173,875	7,479	5,112	7,479
Adj. R^2	6.27%	6.26%	6.18%	8.38%	8.35%	8.35%
Fixed effects	Director/ year	Director/ year	Director/ year	Director/ year	Director/ year	Director/ year

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Although we incorporate director fixed effects in models 1–3 of Table 3, this may not fully account for the influence of directors' unobservable, innate traits on CEO-turnover sensitivity to performance (i.e., the interaction term). To address this concern, we repeat the director-level analysis but restrict the sample to only those directors who fire CEOs more than once. This sample restriction allows us to compare the sensitivity of forced CEO turnover to firm performance within the same director before and after the director became experienced. By focusing on this subsample of directors, we are able to remove the concern that we are only capturing cross-sectional differences between directors who fire CEOs and those who do not. We report these results in models 4–6 of Table 3. We continue to find a significantly negative interaction between each measure of experience and firm performance. Finally, in results reported in our Supplementary Material, we split our main sample into even and odd years and repeat our main CEO-turnover analyses using both the EXPERIENCED and EXPERIENCED_AFTER_JOINING definitions across both the firm- and director-level models. We find similar results in both odd and even years of the sample. Because the two subsamples can be considered to be holdout samples for each other, the evidence suggests that our results are not merely an in-sample result. These results provide strong evidence that forced-CEO-turnover experience changes a director's willingness to dismiss CEOs of underperforming firms and that our results are not solely driven by unobservable director differences.

B. Board-Meeting Attendance

The next board outcome we examine for evidence of directors learning from a CEO-turnover experience is board-meeting attendance, which is a measure of active board monitoring. Here we consider whether experienced boards behave differently from inexperienced boards in a manner that could affect CEO-turnover decision making. Board meetings represent opportunities for independent directors to share information and, if necessary, to form a coalition to remove the CEO. Experienced directors can influence the board-meeting attendance of their fellow independent directors in at least two ways. First, because assessing the ability of the CEO is an important task of the board, and if experienced directors have learned to monitor the CEO better through their prior experience, it is likely that they can help the board to produce more information about the CEO's ability in and around board meetings. This increases the importance of attending these meetings for fellow independent directors. Second, drawing from their own experience, experienced directors are likely more influential in persuading their fellow directors to attend board meetings to facilitate closer monitoring of the CEO and more information sharing. For these reasons, we expect boards with an experienced director to exhibit better board-meeting attendance by all independent directors.

We measure board-level meeting attendance by the total number of independent directors who attended less than 75% of the meetings in a given year and report the results in Table 4. In model 1, we find that the presence of an experienced director is negatively correlated with meeting absences by independent directors. The coefficient is statistically significant at the level of less than 1%. The results are similar in model 2, in which we consider only the presence of directors who became experienced after joining the board. In model 3, we separately consider experience

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TABLE 4

Experienced Directors and Board-Meeting Attendance

Table 4 reports the results of board-level regression analyses of independent director meeting attendance using ordinary least squares (OLS) models. The dependent variable is the number of independent directors on the board who attended less than 75% of the meetings during the year. EXPERIENCED_AFTER_JOINING equals 1 if at least one director on the board is an independent director and has experienced a forced Chief Executive Officer (CEO) turnover in another firm (after joining the board of this firm), and 0 otherwise. In the model using EXPERIENCED_AFTER_JOINING, we exclude observations with experienced directors who joined the board after acquiring their experience. EXPERIENCED_IN_SAME(DIFFERENT)_CLUSTER equals 1 if at least one of the directors on the board is independent and has experienced a forced CEO turnover in another firm and this firm is in the same (different) cluster as the firm where the initial experience was acquired, and 0 otherwise. All variable definitions are in the Appendix. All models incorporate industry and year fixed effects and use robust standard errors (White (1980)) clustered by firm. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS (1/0)		
Dependent Variable: ATTEND_LESS_75%	Model 1	Model 2	Model 3
EXPERIENCED	−0.016***		
	(<.01)		
EXPERIENCED_AFTER_JOINING		−0.027***	
		(<.01)	
EXPERIENCED_IN_SAME_CLUSTER			−0.020***
			(<.01)
EXPERIENCED_IN_DIFFERENT_CLUSTER			−0.008
			(0.32)
CEO_BOARD_TENURE	0.001***	0.001***	0.001***
	(<.01)	(<.01)	(<.01)
PERCENT_INDEPENDENT_DIRECTORS	0.002***	0.002***	0.002***
	(<.01)	(<.01)	(<.01)
BOARD_SIZE	0.026***	0.027***	0.026***
	(<.01)	(<.01)	(<.01)
ln(MARKET_CAP)	−0.0154***	−0.0152***	−0.016***
	(<.01)	(<.01)	(<.01)
ROA	−0.014	−0.011	−0.016
	(0.46)	(0.54)	(0.39)
TOBIN_Q	0.006***	0.004*	0.006***
	(<.01)	(0.05)	(<.01)
BUSY_BOARD	0.01	0.016	0.01
	(0.59)	(0.42)	(0.59)
No. of obs.	27,671	23,244	27,671
Adj. R^2	6.78%	7.27%	6.78%
Fixed effects	Industry/year	Industry/year	Industry/year

gained in a similar firm, EXPERIENCED_IN_SAME_CLUSTER, and that gained in a dissimilar firm, EXPERIENCED_IN_DIFFERENT_CLUSTER. We find stronger results, both economically and statistically, when the board has a director with prior CEO turnover experience in a similar firm. The coefficient estimate for a board with a director with experience in a dissimilar firm is also negative, but it is insignificant. Overall, the evidence suggests that boards with experienced directors operate differently than other boards, and the direction of this particular difference is consistent with more information sharing among directors, which could lead to better board engagement.

C. Decisions on Hiring New CEOs

CEO firing and hiring decisions are intimately connected. The firing of a CEO inevitably requires the board to hire a new CEO. The decision to fire a CEO itself likely depends on whether a better replacement is available. Thus, an experienced

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director is likely to have learned about both firing and hiring decisions from prior forced-CEO-turnover experience. The CEO-turnover literature has long recognized the different challenges faced by the board when hiring externally versus internally and the different implications for the turnover firm. Outside hires typically bring greater changes to a firm;[9] however, because directors in general know less about outsiders than insiders, they typically view outsiders as riskier candidates and thus, in many situations, can be too conservative in hiring outside CEOs. Because learning from prior forced-CEO-turnover experience is likely to improve directors' ability to assess a new CEO's skill and to manage the risk, we expect that the presence of experienced directors on a board will increase the board's likelihood to appoint an outside CEO.

We obtain our data on new CEO type from Eisfeldt and Kuhnen (2013) for the period up to 2006.[10] We then extended their data to 2017. In our sample, 52.3% of the CEOs are replaced with a firm insider, and 47.7% are replaced with a firm outsider. In Table 5, we estimate linear probability models predicting whether the new CEO is an outsider using the three different measures of the presence of experienced directors on the board as the key independent variables.

Model 1 shows that the presence of experienced directors on a board is associated with a 10.4-percentage-point-higher likelihood of hiring an outside CEO (p-value = 0.02). In model 2, we restrict the experienced directors to those who acquired their initial experience after joining the current boards, and we find similar results. In model 3, we separate turnover experience into that acquired from similar and dissimilar firms. Both experience indicators are associated with a higher likelihood of appointing an outside CEO, although the coefficient associated with similar firm experience is statistically stronger (p-value = 0.10). These results are consistent with experienced boards being more likely to hire outside CEOs, with boards with experienced directors from similar firms more uniformly doing so.

D. Shareholder Reaction to Announcements of Experienced-Director Appointments

Next, we study whether shareholders recognize and value that experienced directors have learned from their forced-CEO-turnover experience by examining the shareholder reaction to new announcements of independent director appointments. Initially, we identify 1,959 appointments of independent directors. To avoid contaminating our sample with confounding events, we consider only appointments that do not coincide with other events that shareholders may react to. Specifically, we do not consider multiple appointments or appointments simultaneous with departure announcements of other directors. We also do not consider

[9]For example, Parrino (1997) finds that firms are more likely to hire externally after forced CEO turnovers than after voluntary CEO turnovers, and for both types of turnovers, the likelihood of appointing an external replacement is negatively correlated with the firm's ROA relative to its industry peers. Relatedly, Eisfeldt and Kuhnen (2013) find that firms are more likely to hire industry outsiders after negative industry shocks. Khurana and Nohria (2000) find that forced CEO turnovers followed by external hires are associated with significant improvement in ROA, whereas those followed by internal hires are associated with no improvement in ROA.

[10]We thank Eisfeldt and Kuhnen for making their data available.

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TABLE 5

Experienced Directors and New CEO Selection

Table 5 reports the results of linear probability regressions of the selection of a new Chief Executive Officer (CEO) around forced CEO turnovers in our sample. The dependent variable equals 0 if the newly selected CEO is from within the firm and equals 1 if the new CEO is from outside the firm. Return on assets (ROA) equals earnings before interest and taxes (EBIT) divided by the average total assets in the year prior to the CEO departure. EXPERIENCED_AFTER_JOINING equals 1 if at least one director on the board is an independent director and has experienced a forced CEO turnover in another firm (after joining the board of this firm), and 0 otherwise. In the model using EXPERIENCED_AFTER_JOINING, we exclude observations with experienced directors who joined the board after acquiring their experience. EXPERIENCED_IN_SAME(DIFFERENT)_CLUSTER equals 1 if at least one of the independent directors on the board has experienced a forced CEO turnover in another firm that is in the same (different) cluster as the current firm, and 0 otherwise. All variable definitions are in the Appendix. All models include industry and year fixed effects and use robust standard errors (White (1980)) clustered by year. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS		
Dependent Variable: New Outsider CEO	Model 1	Model 2	Model 3
EXPERIENCED	0.104**		
	(0.02)		
EXPERIENCED_AFTER_JOINING		0.127*	
		(0.08)	
EXPERIENCED_IN_SAME_CLUSTER			0.088*
			(0.10)
EXPERIENCED_IN_DIFFERENT_CLUSTER			0.085
			(0.28)
ln(ASSETS)	−0.041***	−0.032**	−0.041***
	(0.00)	(0.04)	(0.01)
TOBIN_Q	−0.002	−0.003	−0.002
	(0.64)	(0.50)	(0.66)
ROA	−0.398*	−0.542*	−0.400*
	(0.05)	(0.05)	(0.06)
CEO_AGE	−0.000	−0.002	−0.000
	(0.85)	(0.51)	(0.92)
CEO_CHAIR_DUALITY	0.106	0.082	0.104
	(0.16)	(0.30)	(0.17)
CEO_OWNERSHIP	−0.018***	−0.018***	−0.018***
	(0.00)	(0.00)	(0.00)
PERCENT_INDEPENDENT_DIRECTORS	0.002	0.002	0.002
	(0.25)	(0.28)	(0.23)
BOARD_SIZE	−0.021*	−0.026**	−0.021*
	(0.07)	(0.02)	(0.08)
No. of obs.	558	452	558
Adj. R^2	5.0%	8.0%	4.5%
Fixed effects	Industry/year	Industry/year	Industry/year

appointments due to activist pressure, appointment announcements that coincide with proxy statement filings, or those found to coincide with an earnings release or restructuring announcement. This leaves us with 1,059 announcements. Finally, we exclude appointments to firms that already have at least one experienced director on the board because the stock price may have already reflected the benefits of an experienced board. This leaves us with 863 announcements of director appointments. We measure the shareholder reaction as the cumulative abnormal return (CAR) for the 5 days, [–2, +2], around the announcement date. The abnormal return is the daily stock return less the estimated return using the market model, which we estimate over the 200 days of past returns ending 10 days prior to the announcement date using the CRSP value-weighted index as the market proxy, and is winsorized at the top and bottom 1%. The mean CAR for the sample is 0.45%. The mean CARs for the appointment of experienced and inexperienced directors are 1.59% and

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0.40%, respectively. Although both of these mean CARs are significantly different from 0, they are not significantly different from each other in a 2-tailed *t*-test (*p*-value = 0.15). However, we have not accounted for shareholders' anticipation for the potential need to remove the CEO. Thus, we focus on multivariate analyses in the discussion that follows.

In Table 6, we report results from multivariate regressions of CARs around director appointments. We control for director age, number of other directorships, and firm size. We also condition the effect of experienced director appointments on shareholders' anticipation of the need for assessing the incumbent CEO's ability by including an interaction between firm stock performance and the indicator for an experienced-director appointment. If the firm is performing poorly, we expect shareholders to be particularly interested in the new director's ability to assess and, if necessary, replace a CEO. In all models, we incorporate industry and year fixed effects and use robust standard errors clustered by firm to account for the fact that some firms have multiple instances of director appointments.

In model 1, the coefficient estimate for the experienced director indicator is positive, with a *p*-value of 0.10, suggesting that shareholders value appointments of experienced directors. More interestingly, the coefficient for the interaction term is negative and significant (*p*-value < 0.01), which indicates that shareholders especially value experienced-director appointments when performance is poor, and thus the need to consider firing the incumbent CEO increases.[11] In model 2, we focus on whether shareholders react differently based on whether the appointing firm is in the same cluster as the firm where the directors acquired their initial experience. The coefficient estimates suggest that the stock market reacts positively to both types of appointments (same vs. different cluster), although the estimate for experienced directors in the same cluster is statistically stronger (*p*-value = 0.10 vs. 0.35). The interaction term for each measure with firm performance is negative and significant, but again, only that for experienced directors in the same cluster is statistically significant (*p*-value < 0.01).

In models 3 and 4, we replace stock performance with an indicator that equals 1 if the firm's stock performance in the prior year is below the annual median, and 0 otherwise. In both models, we continue to find strong evidence that shareholders who face a greater need to assess their CEO's ability exhibit a significantly stronger positive reaction to the appointment of an experienced director, particularly one whose experience came from a similar firm. The *F*-tests for the net effect of the appointment of an experienced director in a poorly performing firm are positive in both models. These results are consistent with shareholders recognizing and valuing experience gained from being involved with a prior forced CEO turnover.

[11] In unreported results, we repeat this regression before each step of the sample filtering to assess the effect of the sample reduction on our coefficient estimate. First, consistent with confounding events at the time of the director appointments dampening the coefficient estimate rather than driving it, when we use the full sample of 1,959 director appointments, we find that the *p*-value for the coefficient of the interaction term increases to 0.14, although the sign remains negative. Next, consistent with the lower marginal benefit from appointing experienced directors to boards that already have experienced directors, we find that adding back the appointments to experienced boards to our final sample (an increase in sample size from 863 to 1,059 observations) reduces the magnitude of the coefficient estimate (–0.0127 vs. –0.0148) slightly, although the *p*-value for the coefficient is still less than 0.01.

TABLE 6

Shareholder Reaction to Appointment Announcements of Experienced Directors

Table 6 reports the results of ordinary least squares (OLS) regression analyses of shareholder reaction to the appointment announcements of independent directors. The dependent variable is the winsorized (top and bottom 1%) 5-day cumulative abnormal return (CAR). The abnormal return is the firm's daily stock return less the estimated daily return from a market model and is cumulative for the 5 days surrounding the announcement of the director's appointment to the board on day $t = 0$ [−2,2]. We exclude announcements with multiple news events. We also exclude appointments to firms with an experienced board. EXPERIENCED_DIRECTOR equals 1 if the independent director has experienced a forced Chief Executive Officer (CEO) turnover in another firm, and 0 otherwise. EXPERIENCED_IN_SAME(DIFFERENT)_CLUSTER equals 1 if the director has experienced a forced CEO turnover in another firm and this firm is in the same (different) cluster as the firm where the initial experience was acquired, and 0 otherwise. STOCK_RETURN is the prior-year annual total stock return. POOR_PERFORMANCE (1/0) is an indicator variable that equals 1 if the prior-year stock return is below the annual median, and 0 otherwise. All variable definitions are in the Appendix. All models incorporate industry and year fixed effects and use robust standard errors (White (1980)) clustered by firm. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	OLS			
Dependent Variable: 5_DAY_CAR (Market Adjusted)	Model 1	Model 2	Model 3	Model 4
STOCK_RETURN	−0.01**	−0.009**		
	(0.02)	(0.02)		
POOR_PERFORMANCE (1/0)			0.006*	0.006*
			(0.08)	(0.09)
EXPERIENCED	0.013*		−0.009	
	(0.10)		(0.29)	
EXPERIENCED_IN_SAME_CLUSTER		0.015*		−0.013
		(0.10)		(0.23)
EXPERIENCED_IN_DIFFERENT_CLUSTER		0.02		0.002
		(0.35)		(0.89)
EXPERIENCED × STOCK_RETURN	−0.015***			
	(<.01)			
EXPERIENCED_IN_SAME_CLUSTER × STOCK_RETURN		−0.016***		
		(<.01)		
EXPERIENCED_IN_DIFFERENT_CLUSTER × STOCK_RETURN		−0.008		
		(0.77)		
EXPERIENCED × POOR_PERFORMANCE (1/0)			0.034**	
			(0.03)	
EXPERIENCED_IN_SAME_CLUSTER × POOR_PERFORMANCE (1/0)				0.045**
				(0.02)
EXPERIENCED_IN_DIFFERENT_CLUSTER × POOR_PERFORMANCE (1/0)				0.028
				(0.36)
ln(AGE)	0.045***	0.045***	0.046***	0.046***
	(<.01)	(<.01)	(<.01)	(<.01)
NUMBER_OF_DIRECTORSHIPS	−0.00002	−0.0001	0.0002	0.00003
	(0.99)	(0.96)	(0.93)	(0.99)
ln(SALES)	−0.002	−0.002	−0.002	−0.002
	(0.16)	(0.15)	(0.19)	(0.18)
No. of obs.	863	863	863	863
Adj. R^2	2.18%	2.09%	1.23%	1.23%
Fixed effects	Industry/year	Industry/year	Industry/year	Industry/year
F-test: EXPERIENCED + EXPERIENCED × POOR_PERFORMANCE = 0	−0.001**	−0.001**	0.025*	0.032**
p-value	*0.03*	*0.03*	0.07	0.04

E. Do Experienced Directors Make Better Forced-CEO-Turnover Decisions? A Discussion

We have shown that prior forced-CEO-turnover experience changes directors' CEO firing and hiring decisions, increases their board influence, and makes them more favorably viewed by shareholders of poorly performing firms. A natural

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question to ask is whether these changes lead to better subsequent forced-CEO-turnover decisions. Unfortunately, this is a very difficult question to answer empirically. In theory, the shareholder-wealth effects of CEO-turnover decisions are impounded in stock prices. However, changes in stock price around a forced CEO turnover depend on multiple factors. Besides the quality of the decision on CEO firing, they also depend on stock market anticipation of the turnover (Warner et al. (1988), Milbourn (2003)), new information being revealed by the turnover, and change in the turnover firm's systematic risk. Because the contribution of these other factors to changes in stock prices is empirically unknown, it is difficult, if not impossible, to draw definite conclusions from any tests based on stock price. As an illustration, let's consider an event study of forced-CEO-turnover announcements. If experienced directors make better decisions, we might expect these boards to be associated with a higher announcement return relative to a board with no experienced directors. However, if forced CEO turnovers made by boards with experienced directors are more anticipated by the market than those made by boards with no experienced directors, then the magnitude of the market reaction to turnovers made by boards with experienced directors can actually be much smaller, even negligible. Alternatively, if experienced boards are actually monitoring the CEO more stringently and can detect a poorly performing CEO before performance drops drastically, consistent with our other findings, then experienced boards can become aware of a CEO's poor ability well before the market. If this case prevails, we would expect the announcement CAR of experienced boards to be lower than that for boards without experienced directors because in these firms, the announcements reveal to the market the information the experienced directors had ascertained (i.e., the market would now realize the CEO was worse than they had previously thought). This argument is articulated by Hermalin and Weisbach (1998), who note that if directors are better at acquiring private information about the CEO, then the market reaction to the announcement of a forced CEO turnover decision will be more negative. Therefore, because there are reasonable arguments for a positive effect, a negative effect, and a negligible effect, the results from such a test would be ambiguous.

An alternative to using stock-price-based measures of the quality of a CEO firing is to examine the change in operating performance around the CEO turnover, which is not subject to the same information concerns as the stock-price-based measures. However, the change in operating performance does not reflect the full effect of the CEO firing on shareholder value. We still cannot conclusively answer the question of whether experienced directors make better forced-CEO-turnover decisions.

In unreported results, we find that CEO firings by experienced directors are associated with a higher buy-and-hold abnormal return over the 25 months surrounding the announcement month of the CEO firing and a greater improvement in operating performance from the turnover year to 2 years after the new CEO is in office than CEO firings by inexperienced directors. However, for the reasons discussed previously, we refrain from claiming that experienced directors make better CEO firing decisions. Nonetheless, the evidence suggests that experienced directors at least make no worse decisions than inexperienced directors.

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V. Director Experience and Labor-Market Consequences

We examine the labor-market consequences of acquiring forced-CEO-turnover experience to better understand how the director labor market values monitoring experience and the ex ante incentives provided by the director labor market with regard to firing CEOs.

A. Likelihood of Gaining and Losing Directorships

Table 7 presents results from director-firm-year level linear probability models with director and year fixed effects estimating the annual likelihood of gaining or losing a directorship. The dependent variable in model 1 equals 1 if a director gains at least one new directorship in a year, and 0 otherwise. The key independent variable is an indicator for whether the director has already experienced a forced CEO turnover. The coefficient estimate indicates that directors are 3.4 percentage points less likely to gain new directorships annually after they become experienced relative to before they became experienced, and this difference is statistically significant (p-value < 0.01).

In model 2, the dependent variable equals 1 if a director loses the current directorship, including the ones held during the experience and those gained afterward, in the following year, and 0 otherwise. We find that prior forced-CEO-turnover experience does not significantly change the likelihood of losing a directorship. Together with model 1, this evidence indicates that over the long term, gaining experience with a forced CEO turnover has an asymmetric effect on director labor-market opportunities.

B. CEO Influence

Because many CEOs probably prefer less monitoring, we expect firms with more influential CEOs to be less likely to appoint experienced directors if these directors are indeed stronger monitors. We test this hypothesis in Table 8. The regression models are linear probability models with industry and year fixed effects. The unit of observation is a firm-year, and the dependent variable equals 1 if the board appoints an experienced director in that firm-year, and 0 otherwise. The key independent variable is a CEO power index. Because CEO influence over board decision making can come in many forms, such as through greater ownership, tenure, or being the chair, there is no readily available single measure that can capture all aspects. Therefore, we conduct a principal-component analysis of the previous three measures and extract the first principal component as our measure of CEO influence, CEO_POWER_INDEX.

We estimate model 1 using all firm-year observations in the sample. The coefficient on CEO_POWER_INDEX is significantly negative. While holding all other variables at their mean, the annual likelihood of a firm appointing an experienced director is 0.11. Thus, a 1-standard-deviation increase in CEO_POWER_INDEX is associated with a 2.7% reduction in the annual likelihood the firm will appoint an experienced director. Because firms do not appoint directors

TABLE 7

Directorships Gained and Lost

Table 7 reports the results of director-level regression analyses of changes in the number of directorships held by independent directors in the sample. The sample period is from fiscal years 1997 to 2017. EXPERIENCED equals 1 if the director has prior experience with a forced Chief Executive Officer (CEO) turnover in the sample in another directorship, and 0 otherwise. The dependent variable in model 1 is an indicator variable that equals 1 if the director adds a new directorship in the next year, and 0 otherwise. In model 2, the dependent variable is an indicator variable that equals 1 if the director loses the current directorship in the next year, and 0 otherwise. All models incorporate director and year fixed effects and robust standard errors clustered by director. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. All variable definitions are in the Appendix. *, **, and *** indicate statistical significance at the 10%, 5%, and 10% levels, respectively.

Dependent Variable	Model 1 Directorship to Be Added	Model 2 Directorship Lost
EXPERIENCED	−0.034*** (<.01)	−0.003 (0.57)
BUSY	−0.003*** (<.01)	0.006*** (<.01)
ln(AGE)	0.108*** (<.01)	−0.018 (0.58)
OWNERSHIP	−0.009 (0.92)	0.1 (0.42)
ln(BOARD TENURE)	0.0104*** (<.01)	0.034*** (<.01)
CEO_OWNERSHIP	−0.012 (0.37)	−0.007 (0.77)
ln(CEO_TENURE)	−0.00003 (0.98)	−0.01*** (<.01)
CEO_CHAIR_DUALITY	0.001 (0.74)	0.011*** (<.01)
BOARD_SIZE	0.001** (0.01)	0 (0.72)
STOCK_RETURN	−0.001 (0.61)	−0.001 (0.45)
ln(SALES)	0.002*** (<.01)	−0.017*** (<.01)
TOBIN_Q	0.002*** (<.01)	−0.01*** (<.01)
INST_OWNERSHIP_RATIO	0.006** (0.04)	−0.017** (0.01)
SALES_GROWTH	−0.002** (0.03)	−0.005*** (<.01)
No. of obs. R^2	179,447 8.85%	179,447 11.99%
Fixed effects	Director/year	Director/year

each year, other factors associated with firm-years in which directors are appointed could drive this result. For example, a powerful CEO may be less likely to have any board turnover, and this reduction in appointments could cause a spurious relation between CEO power and experienced-director appointments. For this reason, in model 2, we restrict the sample to only firm-years in which new independent directors are appointed. We again find a negative coefficient estimate for CEO_POWER_INDEX, whose *p*-value is 0.10. This is evidence that influential CEOs are not supportive of appointing directors with CEO-turnover experience and suggests that powerful CEOs can adversely affect the labor-market demand for directors who are known to be stronger monitors.

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TABLE 8

New Directorship Appointments and CEO Power

Table 8 reports the results of firm-level regressions of new independent director appointments in the sample. The sample period is from fiscal years 1997 to 2017. The unit of observation is a firm-year. Model 1 is estimated using all firm-years in the sample, whereas model 2 is estimated using only firm-years where new directors are appointed. The dependent variable equals 1 if the firm appoints at least one director during the year with prior experience of a forced Chief Executive Officer (CEO) turnover acquired in another firm, and 0 otherwise. CEO_POWER_INDEX is computed as the first principal component of CEO_OWNERSHIP, CEO_BOARD_TENURE, and CEO_CHAIR_DUALITY. All models incorporate industry and year fixed effects and robust standard errors clustered by year. The corresponding *p*-values are reported in parentheses beneath each coefficient estimate. All variable definitions are in the Appendix. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Dependent Variable: Appoint an Experienced Director	Model 1 All Firm Years	Model 2 Firm Years with Director Appointments
CEO_POWER_INDEX	−0.003*** (0.01)	−0.004* (0.10)
BOARD_SIZE	0.004*** (<.01)	0.005*** (<.01)
PERCENT_INDEPENDENT_DIRECTORS	0.0004*** (<.01)	0.0004*** (<.01)
OUTSIDE_DIRECTOR_OWNERSHIP	0.0001 (0.30)	0.0001 (0.37)
BUSY_BOARD	0.0242** (0.04)	0.053** (0.02)
STOCK_RETURN	0.001 (0.49)	0.003 (0.42)
ln(SALES)	0.006*** (<.01)	0.011*** (<.01)
TOBIN_Q	−0.0004 (0.39)	−0.001 (0.3)
INST_OWNERSHIP_RATIO	−0.013** (0.01)	−0.033*** (<.01)
SALES_GROWTH	−0.002 (0.36)	−0.002 (0.58)
No. of obs.	26,202	11,751
Adj. R^2	1.81%	2.26%
Fixed effects	Industry/year	Industry/year

C. Difference in Differences

Given the evidence outlined previously, why would a director want to fire the CEO of a poorly performing firm? It is possible that the decision to fire is relatively better for the director's career than the alternative of retaining the CEO and allowing the poor performance to continue. To examine this possibility, we create a matched sample of independent directors, where we match each director whose board fires the CEO, and thus becomes experienced (henceforth *treatment director*), with a director who has the closest propensity to fire the CEO but whose firm does not do so, and thus remains inexperienced (henceforth *control director*). Then we examine the changes in the number of directorships held by the treatment and control directors around the CEO-turnover events in a difference-in-differences (DiD) framework.

We start with 3,664 independent directors who experience their first forced turnover. We then match each treatment director with a control director in the same year and industry but from a firm that does not fire its CEO and that has the closest propensity score to the treatment director to fire the CEO. We estimate the propensity score from the CEO-turnover model in Table 3 with director and year fixed

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TABLE 9

Matched Sample: Difference-in-Differences Analysis of Director Labor-Market Outcomes

Table 9 reports results of difference-in-differences analyses that compare the changes in directorships held by independent directors who experience a forced Chief Executive Officer (CEO) turnover to that by a matched sample of inexperienced control directors around the experienced directors' first forced CEO turnover. The matching is based on a director's propensity to fire a CEO in a firm-year estimated using the forced-CEO-turnover model in Table 3, excluding all of the experience variables. The treatment directors are identified to be independent directors in the year they experience their first forced-CEO-turnover event. The matched control directors are independent directors who have the closest propensity score to fire the CEO to the treatment directors but did not do so and are in the same industry and year as the treatment directors. We require the propensity scores of the control directors to be within a 2.5% radius of that of the treatment directors. Panel A reports the number of directorships held by treatment and control directors before and after the treatment directors experienced their first forced CEO turnover, the event year. Panel B reports the number of directorships a director holds at least 4 years from the year prior to the event as a fraction of the number of directorships held in the year prior to the event year. These directorships are separated into high- and low-ranking directorships. High-ranking (low-ranking) directorships are those that are above (below) the median directorship size by market capitalization for that director-year. The *p*-values are reported in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Number of Directorships

	Pre-Experience	Post-Experience	Difference	*p*-Value
TREATMENT_EXPERIENCED_DIRECTOR	2.00	1.94	0.06***	(0.00)
MATCHED_INEXPERIENCED_DIRECTOR	1.82	1.62	0.20***	(0.00)
Difference	0.18***	0.32***	0.14***	
p-value	(0.00)	(0.00)	(0.00)	

Panel B. Remaining Directorships at Least 4 Years from Year Prior to Firing

	High-Ranking Directorship	Low-Ranking Directorship	Difference	*p*-Value
TREATMENT_EXPERIENCED_DIRECTOR	0.547	0.504	0.043***	(0.00)
MATCHED_INEXPERIENCED_DIRECTOR	0.471	0.482	−0.011	(0.58)
Difference	0.076***	0.022	0.054**	
p-value	(0.00)	(0.19)	(0.02)	

effects (excluding the director-experience measures). We also require the propensity score of the matching director to be within 2.5% of the treatment director's score. We find matched control directors for 2,893 treatment-director observations.

We use this matched sample to estimate the difference in the realized labor-market outcomes of experienced directors relative to their potential labor-market outcomes had their boards not fired their CEOs. We compare the average annual number of directorships held by treatment and control directors in the years before and after the turnover event, excluding the turnover years. This comparison provides an estimate of the net incentive effect from the various labor-market forces. The DiD framework allows us to see the differences in labor-market outcomes between treatment and control directors while accounting for changes around the event within each group.

The univariate DiD results are reported in Panel A of Table 9. In the years prior to their first turnover experience, treatment directors hold more directorships than the matched control directors on average. In the post-experience period, both types of directors see a reduction in the average annual number of directorships held, likely reflecting a penalty for being associated with poor firm performance. However, the control directors lose significantly more directorships than the treatment directors do. This suggests that the ex post settling up in the directorial labor market still provides an incentive for directors to replace CEOs in poorly performing firms. Harford (2003) finds similar evidence of ex post settling up that provides incentives for directors in poorly performing firms to accept takeover offers.

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Although treatment directors are better off than control directors are, they, on average, still hold slightly fewer directorships than they did before they fired the CEOs. Part of this can be due to the influence of powerful CEOs who try to block experienced directors from gaining directorships in their firms. Another part could be due to a negative impact of poor performance on their reputation. Even though the action of firing significantly helps their reputation compared with the control directors, the net effect, on average, is still not positive.

A third potential reason could be a supply effect, whereby the directors may choose not to hold as many directorships following a CEO turnover experience. When directors work through a forced CEO turnover event, they may need to spend more time in the turnover firm and withdraw from other firms. They may also gain a better understanding of the time and energy required to monitor the CEO effectively, and this new information can lead them to limit the number of boards they serve on in the future. Thus, a supply factor could also contribute to the decrease in the number of board seats held by treatment directors.

Although we cannot observe the directorship opportunities that a director declines, one way we can infer that a director is choosing a lighter workload is by examining the quality of the directorships retained versus those relinquished. Masulis and Mobbs (2014) find that directors are more willing to hold on to their relatively larger, more prestigious directorships, whereas they are more willing to relinquish their relatively smaller, less prestigious directorships. Hence, if supply partially drives the reduction in the number of directorships, we expect to see a greater reduction in a director's less prestigious directorships after the turnover experience.

To test for this supply effect, we separate each director's directorships in the year prior to the forced-CEO-turnover event into those that are relatively more prestigious and those that are relatively less prestigious, based on whether it is in a firm with above- or below-the-median market capitalization of the director's portfolio of directorships in that year. Then we look to see what fraction of each type of directorship the director still holds 4 years later (3 years after the turnover year). We report the results of this univariate test in Panel B of Table 9.

We find that treatment directors hold on to a significantly greater fraction of their high-ranking directorships relative to their low-ranking directorships 3 years after a forced CEO turnover. In contrast, there is no significant difference in the fraction of high- and low-ranking directorships that control directors hold 3 years after their firm experienced the nonfiring year. The DiD comparison further reveals that treatment directors retain a significantly greater fraction of their high-ranking directorships than low-ranking directorships 3 years after a forced CEO turnover relative to the control directors. Thus, the loss of directorships by treatment directors is more concentrated in their low-ranking directorships, whereas control directors seem to lose both high- and low-ranking directorships in similar proportions. Because treatment directors exhibit more control over the directorships they lose, more of their losses are likely to be voluntary.

VI. Conclusion

Despite the growing evidence that experience has significant explanatory power for individuals' preferences and decisions, very little has been published

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about the importance of boardroom experience in shaping independent directors' future decisions. We find that directors learn from prior forced-CEO-turnover experience, and this leads to subsequent turnover decisions that are more sensitive to firm performance, better board-meeting attendance among their fellow directors, and a greater willingness and ability to hire an outside CEO. Lastly, shareholders value directors' prior forced-CEO-turnover experience. Collectively, these results suggest that experiencing a forced CEO turnover helps directors learn how to distinguish between a good and a poor CEO and how to best manage the transition to a new CEO if needed.

Although forced-CEO-turnover experience can potentially improve a director's monitoring ability, the director labor market does not reward experienced directors with more board seats. Firms run by powerful CEOs are less likely to appoint directors with prior forced-CEO-turnover experience. However, when we match independent directors who fire their CEOs with those who do not under similar circumstances, the reduction in future directorships is smaller for directors of boards that fire their CEOs, suggesting that firing is a better career choice than not acting at all. We also find that a voluntary supply restriction partially drives the reduction in directorships for experienced directors.

Our evidence suggests that directors learn from prior forced-CEO-turnover experience and that such experience is an important director characteristic that shareholders should be aware of when selecting directors. More broadly, our study provides important evidence that directors' knowledge, skills, and incentives to monitor evolve as they gain experience in making major board decisions. Recognizing this dynamic nature of director decision making has important implications for researchers, shareholders, and policy makers.

Appendix. Variable Definitions

EXPERIENCED: In director-level tests, this is an indicator variable that equals 1 if the independent director has experienced a forced CEO turnover in another firm within our sample, and 0 otherwise. In firm-level tests, this is an indicator variable that equals 1 if at least one independent director on the board has experienced a forced CEO turnover in another firm within our sample, and 0 otherwise.

EXPERIENCED_AFTER_JOINING: In director-level tests, this is an indicator variable that equals 1 if the independent director has experienced a forced CEO turnover in another firm within our sample after joining the board of the current directorship, and 0 otherwise. In firm-level tests, this is an indicator variable that equals 1 if at least one independent director on the board has experienced a forced CEO turnover in another firm within our sample after joining the board of the current directorship, and 0 otherwise.

EXPERIENCED_IN_SAME_CLUSTER: In director-level tests, this is an indicator variable that equals 1 if the independent director has experienced a forced CEO turnover in another firm within our sample and that firm is in the same cluster as the current directorship's firm, and 0 otherwise. In firm-level tests, this is an indicator variable that equals 1 if the board has at least one such

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director, and 0 otherwise. Firms are clustered using the annual standardized firm total market capitalization, Tobin's Q, profitability, and sales growth.

EXPERIENCED_ IN_ DIFFERENT_CLUSTER: In director-level tests, this in an indicator variable that equals 1 if the independent director has experienced a forced CEO turnover in another firm within our sample and that firm is in a different cluster as the current directorship's firm, and 0 otherwise. In firm-level tests, this is an indicator variable that equals 1 if the board has at least one such director, and 0 otherwise.

Director Characteristics

AGE: Director age as reported in RiskMetrics.

OWNERSHIP: The percentage of common shares outstanding held by the director.

NUM_DIRECTORSHIPS: The number of additional directorships identified within the RiskMetrics data set.

BOARD_TENURE: The number of years the director has served on the board.

BUSY: The director holds three or more directorships.

5_DAY_CAR: The 5-day [–2, 2] cumulative abnormal return (CAR). The abnormal return is computed as the actual return minus the return estimated using the market model. The market-model parameters are estimated using 200 days of past returns ending 10 days prior to the appointment announcement day ($t = 0$). The market proxy is the value-weighted index from CRSP.

CEO, Board, and Firm Characteristics

FORCED_CEO_TURNOVER: Equals 1 if a forced CEO turnover is announced in that firm-year, and 0 otherwise.

PERCENT_INDEPENDENT_DIRECTORS: Indicator variable that equals 1 if the percentage of independent directors is greater than 50%, and 0 otherwise.

BOARD_SIZE: Number of directors on the board at year-end.

BUSY_BOARD: Indicator that equals 1 if a majority of the independent directors each hold three or more directorships, and 0 otherwise.

CEO_CHAIR_DUALITY: Indicator variable that equals 1 if the CEO is also the chair of the board, and 0 otherwise.

CEO_OWNERSHIP: The percentage of common shares outstanding held by the CEO.

CEO_TENURE: The number of years the CEO has served on the board.

CEO_POWER_INDEX: The first principal component of CEO_ OWNERSHIP, CEO_CHAIR_DUALITY, and CEO_TENURE.

STOCK_RETURN: Twelve-month monthly compounded return during the fiscal year.

ROA (profitability): Return on assets, defined as earnings before interest, taxes, depreciation, and amortization (EBITDA) divided by beginning-year total assets.

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ASSETS ($millions): Year-end total assets.

SALES ($millions): Year-end total revenue.

MARKET_CAP ($millions): Year-end market capitalization of common shares outstanding.

TOBIN_Q: Year-end market value of equity plus the book value of assets minus the book value of equity all over year-end assets.

INST_OWNERSHIP_RATIO: Fraction of shares held by institutional owners.

SALES_GROWTH: Three-year change in sales.

ATTEND_LESS_75%: The number of independent directors on the board who attended less than 75% of the board meetings during the year.

Supplementary Material

To view supplementary material for this article, please visit http://dx.doi.org/10.1017/S0022109020000307.

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