

**BOARDS AS A SOURCE OF INERTIA:
EXAMINING THE INTERNAL CHALLENGES AND DYNAMICS OF BOARDS OF
DIRECTORS IN TIMES OF ENVIRONMENTAL DISCONTINUITIES**

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ABSTRACT

The literature on corporate governance indicates that, by engaging in strategy-related activities, boards of directors can help firms adapt to environmental discontinuities. So far, however, studies shed limited light on board-internal challenges and dynamics in such difficult times, thus providing few insights into the conditions under which boards may contribute to organizational inertia. We use a comparative case study of 10 major Swiss electric utility companies during the energy transition to show in detail how environmental and strategic change impair boards' ability to judge strategic issues, and how boards use self-evaluation and self-reconfiguration to renew this ability. Moreover, we offer original insights into the board-internal antecedents of board renewal, and show that environmental discontinuities pose a dilemma for boards, since self-evaluation and self-reconfiguration are critical for preventing organizational inertia yet may run counter to board members' self-interest. By showing that board members, like managers, experience conflicts of interest that can harm firm performance, our study contributes to agency theory and an emerging micro-perspective on boards. Moreover, by highlighting boards as a source of organizational inertia, our study challenges existing findings in the field of strategic management and makes several more specific contributions to important debates in the corporate governance literature.

INTRODUCTION

Environmental discontinuities, i.e., major changes in firms' technological, political, economic, or social environment, pose a major challenge to established firms (e.g., Keck & Tushman, 1993; Meyer, Brooks, & Goes, 1990). Such discontinuities may render firms' existing capabilities obsolete, requiring an onerous and risky process of strategic change to enter new markets or build new capabilities (e.g., Christensen & Rosenbloom, 1995; Kaplan, Murray, & Henderson, 2003). Following Hofer and Schendel (1978: 25), we define strategic change as change in the "fundamental pattern of present and planned resource deployments" (see also Haynes & Hillman, 2010). Failure to engage in timely strategic change may harm firms' financial performance (Keck & Tushman, 1993). Indeed, the literature stresses that firms often suffer from organizational inertia—i.e. delayed strategic change in the face of environmental change—which threatens their financial performance (Kelly & Amburgey, 1991; Tripsas & Gavetti, 2000).

The literature on corporate governance suggests that the board of directors (hereafter, "board") is one of the most important bodies involved in strategic change (Judge & Zeithaml, 1992; McNulty & Pettigrew, 1999). Boards critically shape firm strategies by monitoring and controlling organizational decisions and activities (Walsh & Seward, 1990), providing management with information (Zahra & Pearce, 1989), and hiring and firing managers (Westphal & Fredrickson, 2001). How far boards engage in strategy-related activities depends on a number of board characteristics, such as the proportion of non-executive directors, the board's level of expertise, board demographics, or board size (Zahra & Pearce, 1990).

Yet, while boards have been shown to play an important role for strategy-making, current studies provide only limited insights into the internal challenges and dynamics of boards during environmental discontinuities. Initial studies suggest that environmental discontinuities require boards to adjust their characteristics (Boyd, 1990; Hillman, Cannella, & Paetzold, 2000; Judge &

Zeithaml, 1992) and that great diversity and equity ownership in boards may slow down necessary strategic change (Desai, 2016). However, thus far, existing studies dealing with board adjustments and decision-making have focused on studying changes in externally observable characteristics (e.g., board composition and size). As a result, the literature provides only limited insights into how environmental discontinuities affect boards' ability to govern strategic change, and the internal mechanisms through which they maintain this ability (Gabrielsson & Huse, 2004; Shen, 2003).

Moreover, scholars have argued that boards may incur path dependencies that could prevent them from adjusting in a timely manner (Lynall, Golden, & Hillman, 2003). Thus far, however, studies concentrate on the role of the CEO and organizational performance as antecedents of board adaptation, paying less attention to internal factors that may drive board adjustments, such as the motivation of individual members (Boeker & Goodstein, 1991; Hambrick, Werder, & Zajac, 2008). Insights into the internal challenges of boards, as well as the mechanisms and antecedents of board adjustments in times of environmental discontinuities, are critical to understanding why, despite the many ways through which boards can stimulate strategic change, organizations incur inertia that may lead them to fail (Goodstein, Gautam, & Boeker, 1994). As a result, studying board processes in such times allows us to derive important implications for organizations on how to design and improve corporate governance.

To investigate the challenges and dynamics of boards during environmental discontinuities, we use a qualitative comparative case study of 10 leading electric utility companies in Switzerland. The Swiss energy sector is particularly well suited for our purposes because, starting in 2009, it has seen major regulatory and technological change, intensifying competition and slashing profits for electricity generation. The firms in our sample differed in their exposure and responsiveness to this environmental discontinuity. This setting provided a rare opportunity to study how different

levels of environmental change affected boards, how and why boards dynamically adjusted, and how board-internal factors contributed to differences in board responsiveness.

Using a unique set of primary archival and interview data, we offer rich insights into the internal challenges and dynamics of boards during environmental discontinuities. Specifically, we show how both environmental and strategic changes may undermine boards' ability to judge strategic issues, requiring boards to engage in self-evaluation and self-reconfiguration. At the same time, we show that board members' self-interest prevented some boards from engaging in self-evaluation and self-reconfiguration, such that those boards ended up causing organizational inertia if there was no experienced board chair to initiate these activities in a top-down manner.

By providing detailed insights into how board members' self-interest contributes to organizational inertia, our study advances an emerging perspective that has started to question the predominant view in the literature that boards are sources of change and act in the interest of owners (Desai, 2016). Whereas the literature on agency theory sees boards' main role as preventing the adverse consequences for organizations if managers pursue their own interests rather than those of the organization (Eisenhardt, 1989a), we show that during environmental discontinuities, boards themselves experience conflicts of interest that can harm firm performance. In doing so, we also contribute to recent work on the micro-foundations of boards, which has started to investigate the influence of board members' motivations on board dynamics (Hambrick et al., 2008; Hillman, Nicholson, & Shropshire, 2008).

By highlighting boards as a source of inertia, our study also challenges existing findings in the literature on strategic management, which suggests that the main reasons for organizational inertia are biased managerial cognition, a lack of incentive to change, or difficulties in redeploying firm resources (e.g., Gilbert, 2005; Kaplan, 2008). Given that boards have the power to initiate strategic changes and replace managers, such inertia at lower organizational levels might not be

problematic *per se* if the board notices and deals with it. Therefore, our findings suggest that an additional—and potentially more fundamental—source of organizational inertia lies in a lack of self-evaluation and self-reconfiguration that prevents boards from renewing their ability to judge strategic issues.

Finally, by shedding light on board-internal processes, our study also makes three more specific contributions to important debates in the corporate-governance literature. First, by showing how environmental and strategic change undermine boards' ability to evaluate and reconfigure strategies effectively, our study takes a first step toward a much-needed dynamic perspective on boards' social and human capital (Hillman & Dalziel, 2003). Second, by providing detailed insights into how boards use self-evaluation and self-reconfiguration, our study answers calls to examine the learning or evolutionary processes within boards (Gabrielsson & Huse, 2004; Shen, 2003) and helps reconcile inconsistencies in the literature on the relationship between board characteristics and firm performance (e.g., Dalton, Daily, Johnson, & Ellstrand, 1999; Haynes & Hillman, 2010). Third, by showing that self-evaluation and self-reconfiguration are crucial for boards' ability to govern strategic change, we shed light on the factors that shape the relative power balance between management and the board (Pearce & Zahra, 1991).

THEORETICAL BACKGROUND

Environmental Discontinuities and Strategic Change

The need for firms to adapt to changes in their environment is a central tenet in the literature on strategic management (Romanelli & Tushman, 1994; Venkatraman & Camillus, 1984). When technologies, regulation, or customer demands change, firms need to adjust their strategies to develop new capabilities and resources (Christensen & Rosenbloom, 1995; Kaplan et al., 2003). Much of the literature emphasizes that senior managers play a crucial role in facilitating this change

and securing organizational survival (Keck & Tushman, 1993; Meyer et al., 1990; Tushman & Anderson, 1986). According to this literature, senior managers must recognize the need for change and overcome organizational inertia rooted in established resources and routines, which may delay firm responses and harm firm performance (Gilbert, 2005; Kaplan et al., 2003). For example, the literature on upper echelons has identified the characteristics that allow management teams to devise new strategies in times of environmental changes (Hambrick & Mason, 1984). Similarly, more recent work has emphasized that biases in managerial cognition may be a key factor inhibiting change (Barr, 1998; Tripsas & Gavetti, 2000). For example, Kaplan (2008) shows that, in addition to a lack of incentives and capabilities, CEO cognition contributed to organizational inertia in the case of communication firms in the fiber-optic revolution.

Boards of Directors and Strategy

While previous research into firm responses in times of environmental discontinuities focuses on senior managers, studies in the literature on corporate governance stress the important role that boards of directors play in devising and influencing organizational strategies (Johnson, Daily, & Ellstrand, 1996; Zahra & Pearce, 1989). Early work on boards highlighted their core task as monitoring and control. In line with agency theory, the board is responsible for preventing opportunistic manager behavior that runs counter to shareholders' interests (Eisenhardt, 1989a; Jensen & Meckling, 1976; Mizuchi, 1983). Boards therefore monitor CEO performance and compensation (Boyd, 1995; Conyon & Peck, 1998; Daily, 1996), approve or reject management initiatives, oversee strategy implementation (Hendry & Kiel, 2004; Rindova, 1999), and replace managers (Alexander, Fennell, & Halpern, 1993; Conyon & Peck, 1998; Walsh & Seward, 1990).

Besides pointing to (reactive) monitoring and controlling, scholars building on resource dependence, social network, and stakeholder theory have emphasized that boards can take on more

proactive roles in shaping strategies (Daily, Dalton, & Cannella, 2003; Desender, Aguilera, Crespi, & García-Cestona, 2013; Hillman & Dalziel, 2003). According to these perspectives, board members link the firm to important external stakeholders (Boyd, 1990; Hillman et al., 2000; Pfeffer, 1972), thereby facilitating access to critical organizational resources such as capital (Mizruchi & Stearns, 1988), legitimacy (Selznick, 1949), and information (Baysinger & Hoskisson, 1990; Haynes & Hillman, 2010; Zahra & Pearce, 1989). In addition, boards provide advice and counsel to executives (Forbes & Milliken, 1999; Stevenson & Radin, 2009; Westphal, 1999) and play an active part in strategy formulation by conducting analyses, suggesting strategic alternatives (Judge & Zeithaml, 1992; McNulty & Pettigrew, 1999; Rindova, 1999), and selecting new members of the top management team who are in accord with the desired strategic direction (Westphal & Fredrickson, 2001).

Antecedents of Board Strategic Involvement

In addition to studying in detail *how* boards of directors shape strategy, the board literature has also investigated *when* boards engage in strategy-related activities (Zahra & Pearce, 1990). In this context, scholars have found that boards with a higher proportion of non-executive directors, a higher level of social and human capital (i.e., more skills, expertise, and ties to external stakeholders), and greater power over management show a higher propensity to stimulate strategic change (Carpenter & Westphal, 2001; Garg & Eisenhardt, 2016; Golden & Zajac, 2001; Haynes & Hillman, 2010; Pettigrew & McNulty, 1995). Studies show that boards become involved in strategy when organizations are young (Goodstein & Boeker, 1991) and in times of crisis, when firm performance declines sharply and management initiatives fail (Desai, 2016; Johnson, Hoskisson, & Hitt, 1993; Mace, 1971). For example, scholars show that boards place particular emphasis on

monitoring if organizational performance suffers a downturn, or if the CEO does not serve as the board chair (Tuggle, Sirmon, Reutzel, & Bierman, 2010b).

Moreover, research demonstrates that boards' involvement in strategy depends on board demographics and processual factors such as meeting structure and conduct (McNulty & Pettigrew, 1999; Zahra & Pearce, 1990). Board diversity increases the time that boards spend discussing issues related to strategic change (Tuggle, Schnatterly, & Johnson, 2010a). At the same time, scholars have pointed out that having a large, very diverse board may impair decision-making and strategic involvement, particularly if directors own shares in the firm (Alexander et al., 1993; Desai, 2016; Goodstein et al., 1994; Judge & Zeithaml, 1992) and if diversity leads to the formation of subgroups within the board (Tuggle et al., 2010a).

Board Challenges and Dynamics in Times of Environmental Discontinuities

While previous studies have investigated in detail how and when boards shape organizational strategies, the literature currently provides only limited insights into board challenges and dynamics in times of environmental discontinuities. Indeed, although scholars have defined boards' strategic role as "taking important decisions on strategic change that help the organization adapt to important environmental changes" (Goodstein et al., 1994: 242), the literature is full of examples showing how established firms fail to adjust to environmental discontinuities. This raises the question of how boards may contribute to inertia, rather than helping firms overcome it. Specifically, two important questions need to be answered.

First, to understand how boards contribute to organizational inertia, it is pivotal to understand how environmental discontinuities affect boards' ability to govern strategic change and how boards adjust over time to maintain this ability (Gabrielsson & Huse, 2004; Pugliese et al., 2009; Shen, 2003). Environmental discontinuities transform competitive dynamics and force firms

to enter unfamiliar fields, which may make strategic governance more difficult for boards. Indeed, initial studies suggest that the value of a board's human and social capital depends on the firm context (Krause, Semadeni, & Cannella, 2013; McDonald, Westphal, & Graebner, 2008; Oehmichen, Schrapp, & Wolff, 2017) and that changes in firms' environment may require boards to adjust their composition (Almandoz & Tilcsik, 2016; Boyd, 1990; Dowell, Shackell, & Stuart, 2011; Hillman et al., 2000). For example, Carpenter and Westphal (2001) show that team heterogeneity and diverse board ties tend to be more important for board effectiveness in times of environmental discontinuities.

Yet, while existing studies acknowledge that boards need to adjust to environmental changes, studies of boards' adjustments have so far focused on investigating externally observable characteristics (such as boards' composition and size) using variance studies (Golden & Zajac, 2001; Judge & Zeithaml, 1992; McNulty & Pettigrew, 1999). As a result, the literature provides only limited insights into the ways through which environmental discontinuities affect board effectiveness and boards' internal mechanisms of adjustment (Desai, 2016; Gabrielsson & Huse, 2004; Shen, 2003). Indeed, many scholars still consider board behavior and the underlying processes a "black box"—probably because access to boards is limited for most scholars, and members are reticent about internal board matters (Daily et al., 2003; Gabrielsson & Huse, 2004; Hambrick et al., 2008). Insights into boards' internal challenges and mechanisms of adjustment are critical if we are to obtain a rounded picture of board dynamics in times of environmental change. For example, boards may adjust through mechanisms other than composition that cannot easily be observed from outside. In addition, studying the internal processes of adjustment helps better understand the contingencies and relationships between different mechanisms of board adjustment.

Second, to understand how boards contribute to organizational inertia, it is critical to understand the board-internal antecedents of board adjustments (Boeker & Goodstein, 1991).

Extant research shows that boards change members following bankruptcy filings (Daily, 1996; Hambrick & D'Aveni, 1992), financial restatements (Arthaud-Day, Certo, Dalton, & Dalton, 2006), organizational performance decline (Boeker & Goodstein, 1991), changes in ownership, or exits from product markets (Hermalin & Weisbach, 2003). Moreover, studies indicate that CEOs often try to shape board composition—e.g., by influencing the decisions of the nomination committee (Shivdasani & Yermack, 1999). Thus far, however, little is known about the board-internal processes that drive or hinder changes in boards. Studies suggest that boards differ in their responsiveness to environmental changes (Boeker & Goodstein, 1991) and may incur path dependencies (Hillman et al., 2000; Lynall et al., 2003). Yet extant research provides limited insights into how board-internal factors might contribute to these phenomena. For example, while research suggests that the motivations of individual board members may decisively shape board dynamics, exactly what motivates members to join boards in the first place remains largely unclear (Hambrick et al., 2008; Hillman et al., 2008). As Hambrick et al. (2008) point out, understanding board members' motivation is critical if one seeks to explain board processes and dynamics.

In sum, given boards' prominent role at the apex of the organization, and the various ways through which they shape strategies, understanding board behavior seems critical if we wish to explain why some firms succeed in adjusting to environmental discontinuities while others fail (Boulton, 1978; Goodstein et al., 1994). However, currently, the literature provides only limited insights into how boards may cause organizational inertia. Therefore, in this paper we provide insights into the inner workings of boards to shed light on the *internal challenges and dynamics of boards of directors in times of environmental discontinuities*.

METHOD

To investigate our research question, we used an inductive, comparative case-study analysis. Qualitative case studies are well suited for providing a rich description of phenomena for which little theory exists (Eisenhardt, 1989b; Eisenhardt & Graebner, 2007; Siggelkow, 2007).

Research Setting and Sample

Following a theoretical sampling approach (Eisenhardt & Graebner, 2007), we decided to study board activities at 10 large utility companies in the Swiss energy sector between 2009 and 2015. This sector is ideally suited for our purpose, since it was subject to a strong environmental discontinuity during this period. To analyze board challenges and dynamics in this environment, we selected firms that were large enough to have a board, but that differed in terms of exposure to the environmental discontinuity. This unique setup allowed us to gain detailed insights into how the challenges of boards differ for firms facing higher and lower levels of environmental change. Moreover, by investigating differences in how boards responded to these challenges across firms with similar exposure, we were able to shed light on the internal mechanisms and antecedents of board adjustments as well as their implications for organizational inertia.

We chose 2009 to 2015 for our analysis because the Swiss electricity sector witnessed several radical regulatory changes, as well as a much harsher (international) business environment, during this period.¹ Until 2009, customers were not at liberty to choose their electricity supplier, leading to regional monopolies that guaranteed electricity suppliers stable revenues and predictable profits. Given that firms did not have to worry about customer churn, the main strategic task of boards before 2009 was, as one director put it, “business as usual.” As a result, none of the 10 firms

¹ We treat the regulatory and technological changes in the Swiss electricity sectors as a single environmental discontinuity because these changes took place within a short period and, in combination, contributed to a decline in conventional and nuclear electricity generation and a boost for renewable energy technologies and energy services. Thus, in terms of speed and impact, the industry dynamics we observe are in line with those of previous studies that have applied the concept of environmental discontinuities.

engaged in major strategic changes, and both boards and management teams focused on investments targeted at improving the efficiency and reliability of conventional power plants.

This situation changed dramatically when the Swiss energy sector was partially liberalized in 2009, allowing large industrial customers to freely select their electricity provider. At the same time, public demand-side subsidies for renewable energy in Switzerland and neighboring countries sharply increased the installed capacity of wind and solar power. Together with a decline in electricity demand (resulting from the 2008 financial crisis), these events led to a drop in electricity wholesale prices. The knock-on effect was to slash margins on conventional electricity generation, to the point where the profitability of coal, hydroelectric, and gas plants was drastically reduced. Finally, in 2011, the Fukushima Daiichi nuclear disaster in Japan prompted the Swiss government to legislate for the phase-out of nuclear technology. Taken together, these changes put significant pressure on electricity suppliers to change their strategies, both to remain competitive and to comply with the new regulation.

From the population of Swiss electricity suppliers affected by the changes, we selected 10 large, well-established firms to ensure that all firms in our sample had a board of directors. In 2013, our sample firms had at least \$150 million in revenues, thereby placing them among the top 25 of roughly 800 Swiss electricity companies, around 80 of which have electricity-generation assets.² Switzerland is a particularly useful country for studying the activities of boards, because they are the highest corporate decision-making body under Swiss law. Whereas in other European countries, such as Germany and Austria, the board's legal role is confined to monitoring and controlling, in Switzerland (similar to the U.S.) boards are also responsible for firm strategies. In contrast to the

² Given its population and size, the country has a very high number of local utilities. The reason lies in the protection of municipal electricity markets, such that even small towns often have their own electricity provider.

U.S., however, board members in Switzerland are personally liable if they neglect their duty of care.³ This level of responsibility was advantageous for our study as it increases the importance and visibility of board activities. In addition, as we were particularly interested in the impact of environmental discontinuities on board adjustments and its drivers, we deliberately sampled firms that exhibited different levels of exposure to the environmental discontinuity. In 2009, only five of our sample firms possessed electricity-generation assets, and focused primarily on electricity generation and wholesaling as their main revenue stream. The other five mostly purchased electricity on the wholesale market, focusing on electricity retail in combination with other services, such as water, heat, and gas supply, as well as telecommunications.

Those firms focused on electricity generation were hit particularly hard by the environmental discontinuity. The decline in electricity prices led to a sharp fall in profits, and the nuclear phase-out and partial liberalization of the Swiss electricity market required firms to invest in new technologies (e.g., related to renewable energy) and look for new business opportunities downstream in the electricity value chain, such as energy services. Those firms focusing on electricity retail, in contrast, were less exposed to the discontinuity. Like the electricity wholesalers, they faced competitive pressure to invest in new business models, and also lost some revenue due to the emergence of distributed power generation (e.g., using solar photovoltaic power). However, such losses remained small, since solar photovoltaic power played a relatively minor role in Switzerland compared to neighboring countries such as Germany or Italy, and electricity sales constituted only a small proportion of total revenues. In fact, for those firms that had not closed long-term electricity purchasing contracts, the fall in wholesale electricity prices was even beneficial, since it allowed them to purchase electricity at significantly lower prices. As one board

³ The process of board-member election in Switzerland resembles that in the U.S., as both owners and the board itself are responsible for shortlisting and selecting candidates.

member summarized the situation: “Electricity prices are plummeting, you can’t stop it.... A few years ago, the electric utilities that generated [electricity] were the kings, [but] the kings of tomorrow are those firms that do not produce, that don’t hold the assets.” To denote whether a firm in our study had low or high exposure to the environmental discontinuity, we identify them with the pseudonyms “LowCorp” (“L1” through “L5”) and “HighCorp” (“H1” through “H5”).

Interestingly, although firms with comparable exposure faced a similar incentive to engage in strategic change, in the course of our study we noted significant differences in the timing of strategic change across firms with the same level of exposure. For example, while some LowCorps were quite proactive in adjusting their strategies, several HighCorps were not. In line with the important role that the literature assigns to boards, we found that a major reason lay in the varying responsiveness of the firms’ boards of directors. Studying the reasons for this allowed us to shed light on how boards contributed to organizational inertia.

Data Collection

We drew on several data sources. First, to obtain information on exposure to the environmental discontinuity, strategic changes, and potential drivers, we collected a comprehensive set of secondary data for all 10 firms. This data set included annual reports, press articles (over seven years), letters to shareholders, company brochures, employee presentations, official company releases, earnings call transcripts, general assembly notes, and videos (from CEOs’ or directors’ talks and presentations). We also developed a database containing background information on all board members (e.g., professional background, list of additional board mandates).

Second, we collected primary data in the form of in-person interviews with board members, CEOs, and top managers. For each firm, we interviewed board members with different lengths of tenure and also the CEO, to obtain board and executive perspectives on board challenges and

dynamics. Moreover, to avoid bias, we selected interviewees with different backgrounds who had been active during our period of interest. Since the firm representatives perceived the topic of our research as very relevant, and we were well connected in the field, only two individuals declined our invitation. In total, we conducted 52 semi-structured interviews with 41 directors and top-level executives in four rounds. Given some board interlocks (i.e. directors with multiple mandates within the sample), we covered 45 different executive and non-executive mandates across 10 of Switzerland's largest utilities (see Table 1).⁴

The 41 interviews of the first two rounds lasted 65–130 minutes. The 11 interviews in the third and fourth rounds were shorter (30–45 minutes), as they aimed at gathering additional information from previous interviewees. For each sample firm, we interviewed two to four non-executive directors, including the chair or vice-chair for eight of the 10 firms. Moreover, our sample included the CEOs of all 10 firms, as well as additional senior managers. In none of our sample firms did senior managers assume the role of board chair or vice-chair. All interviews were recorded, transcribed, and stored in a central interview database (Gibbert, Ruigrok, & Wicki, 2008; Yin, 2009). In addition, we conducted several validation interviews with experienced directors both within and outside the Swiss energy sector, and discussed our research results with a panel of industry experts in a series of workshops. Together, these measures ensured a rich body of data that allowed the triangulation of results (Gibbert et al., 2008).

Insert Table 1 about here

Data Analysis

⁴ None of the selected interview partners had more than two interlocking board or executive mandates. To fulfill the confidentiality requirements that were a prerequisite for most of the interviews, we cannot disclose any information that would allow the identification of either firms or individuals. The total number of unique board members in our 10 sample firms in 2015 was 101.

To analyze our data, we iterated between data collection and theorizing. Our analysis followed four main phases. In phase one, we synthesized the secondary data into an event timeline for each sample firm, describing important changes in the environment; strategy-related events; and events involving board and management personnel.⁵ This procedure allowed us to gain a structured understanding of company histories, the firms' current situation, and strategic changes. A first round of interviews then helped us identify roles and characteristics within boards and top management teams, such as boards' general activities and how they interacted with management. For the analysis, we developed an initial coding scheme based on the corporate governance literature and used our first discussions to refine the initial array of conceptual building blocks.

In phase two, we aimed at capturing the activities in which boards engaged to influence strategic change. To this end, we conducted a second round of interviews, using an updated coding scheme focusing on board-management interaction. We discussed specific events in the firms' timelines with board members and CEOs to get a sense of the role played by the board in initiating or overseeing strategic initiatives. This showed us the key role played by boards' ability to judge strategic issues and board adjustment in effective governance during environmental discontinuities. Consequently, we asked our interviewees to provide detailed information on specific abilities that the board required and changes that the board had been undergoing. We coded the resulting data, using open coding techniques to develop constructs describing board activities related to both strategic change and changes within the boards themselves.

To describe strategy-related board activities, we experimented with existing classifications, such as "monitoring" and "advising." However, these constructs did not capture the full range of

⁵ Changes in the environment included important regulatory or technological changes mentioned in the firms' annual reports. The category of strategy-related events includes, for example, the announcement of investments, strategic initiatives, R&D efforts, pilot projects, divestments, efficiency initiatives, new company visions, product announcements, and reorganization efforts. The category of events related to board and management personnel includes, for example, the appointment or resignation of board members and senior management staff.

the activities that we observed, nor did they allow us to describe activities at the level of precision we required. Therefore, we decided to inductively develop new constructs directly related to our research question, and carefully coded our data to capture all board-related activities, which we later clustered into the broader categories of *strategy evaluation* and *strategy reconfiguration*. Whereas strategy evaluation encompasses all board activities concerned with (passively) monitoring the firm's environment and reviewing its strategy to determine the fit and need for change, strategy reconfiguration comprises all activities during which the board actively manipulates the firm's strategy by approving, stimulating, and limiting strategic change initiatives. In other words, while strategy evaluation aims at appraising a firm's strategy without directly influencing it, strategy reconfiguration directly or indirectly shapes a firm's strategy.

To describe changes in boards, we carefully screened our interview data for activities our interviewees had described as mechanisms of board adjustments. This effort led us to identify many activities that went well beyond changes in board composition, which we clustered into the two broad categories of *self-evaluation* and *self-reconfiguration*. Self-evaluation refers to all board activities aimed at assessing the board's own strengths and weaknesses. Self-reconfiguration, in turn, describes all activities that directly enhance the board's ability to judge strategic issues and thereby help the board regain its ability to govern strategic change in times of environmental discontinuities. We noted that boards that neglected self-evaluation and self-reconfiguration played a part in the emergence of organizational inertia.

In phase three, based on the observation that self-evaluation and self-reconfiguration had an important bearing on organizational inertia, we sought to explain differences in self-evaluation and self-reconfiguration across boards. We noted that the self-interest of board members and the experience and actions of the board chair played an important role in driving or inhibiting these

activities. We thus dug deeper into our data and conducted additional interviews to develop a profound understanding of these antecedents of self-evaluation and self-reconfiguration.

In phase four, which overlapped extensively with the previous phases, we synthesized all interview and archival data to develop a conceptual framework that systematically linked the categories we had derived. For this step, we went back and forth between coding and data collection in the form of additional interviews aimed at identifying and verifying patterns in our data (Yin, 2009). From our archival data we developed detailed tables juxtaposing the firms' exposure to environmental discontinuities, strategic changes, board activities, changes in boards, and financial performance. Furthermore, complementing the event timeline from phase one, we developed a timeline for each firm, describing boards' strategy-related activities between 2009 and 2015. Drawing on our interview data and axial coding, we then distilled the mechanisms explaining the differences we observed across firms and over time. This procedure allowed us to identify, for example, why a particular board had focused on a specific strategy-related activity at a particular point, how self-evaluation and self-reconfiguration were related to strategic change, and the antecedents of varying levels of self-evaluation and self-reconfiguration we observed.

We conducted interviews until further iterations between theory and data led to only marginal improvements (Eisenhardt, 1989b). Thereafter, we recoded all interviews according to our final coding scheme and, to avoid potential coding biases, extensively discussed them (Gibbert et al., 2008).⁶ In a final step, we directly consulted with several of our interviewees on the resulting theoretical framework and eliminated any remaining inconsistencies.

We dealt with construct validity, internal validity, external validity, and reliability (Yin, 2009) with methodological rigor throughout. We ensured construct validity by using triangulation

⁶ The intercoder reliability (Cohen's Kappa) for our coding of strategy-related board activities was 92.3 percent, indicating excellent reliability (Fleiss, Levin, & Paik, 2003).

based on multiple external and internal firm data sources, a thorough review of firm and interviewee histories reflected in structured interview-guides that three researchers independently reviewed, sound coding procedures (Gibbert et al., 2008), and reviews by key informants during the interviews and in separate workshops. We ensured the internal validity by reviewing, discussing, and analyzing rival explanations throughout the research process. We ensured the external validity through analytical generalization via abstraction from empirical observations (Gibbert et al., 2008). This process included strict theoretical sampling, multiple case studies at firms exposed to the same regulatory environment, and cross-case analysis. Finally, to enhance the reliability of our study, we used transcripts, case study protocols, and a comprehensive case study database⁷ (Gibbert et al., 2008) in combination with discussions to prevent and eliminate potential contradictions in the data. Moreover, during the later stages of the project, we used closed coding techniques to ensure that our coding was reliable and generated clearly distinct categories.

RESULTS

Board Roles during Environmental Discontinuities: Strategy Evaluation and Reconfiguration

From 2009, Swiss utilities faced an environmental discontinuity that prompted a shift towards renewable energy and new services. While our sample firms differed in their exposure to the discontinuity, boards played an important role in the process of strategic change for all of them. Specifically, we observed that we could broadly separate boards' strategy-related activities into two main categories: *strategy evaluation* and *strategy reconfiguration*. We briefly describe these activities below, since understanding them is critical for understanding how boards contributed to organizational inertia during the environmental discontinuity.

⁷ Including interview recordings, transcripts, coding schemes, case-study fact books per firm (press releases, annual reports, letter to shareholders, firm internal data), and interview guides.

Strategy evaluation. We define *strategy evaluation* as all board activities concerned with monitoring the firm’s environment and reviewing its strategy to determine the fit and need for change. Strategy evaluation strongly resembles what the literature on corporate governance describes as boards’ “monitoring” or “control” functions (Canyon & Peck, 1998; Johnson et al., 1996). However, monitoring or control also include, for example, activities related to compliance, managerial compensation, and entrenchment (Daily & Schwenk, 1996). We therefore use the term “strategy evaluation” to indicate that we refer only to strategy-related activities.

Board members from all 10 firms reported that they routinely engaged in strategy evaluation. First, several reported that they used annual strategy reviews to assess environmental changes and scrutinize the existing firm strategy. For example, as a LowCorp 2 board member explained, “We have an annual, two-day retreat with the board and the management... Here, developments like the drop in electricity price, they are being flagged.... and then we discuss what this means, what the implications for the firm are” (L2-B1).⁸ Similarly, a HighCorp 4 board member stated that “every year we talk about the strategy and ask ourselves: Is the strategy correct or not, and should we make adjustments?” (H4-B1). Second, boards engaged in strategy evaluation during board meetings, when management presented proposals for strategic changes and the boards discussed them intensively. Several board members stressed that as part of this “monitoring,” “control,” or “supervisory” function (L4-B1, H2-B3, H2-B2, L3-B3, H4-B3), the board “asks critical questions” (H2-B3, L4-B2, H4-B3) and “solicits additional material and clarifications” (L3-B3, H2-B3) to evaluate the risk and return of strategic investments.

⁸ To indicate our interview sources, we use codes in the form of “FX-IY,” where F denotes the firm’s exposure to the environmental discontinuity (“H” for high, “L” for low”), X the number of the firm in the high- or low-exposure group (“1” to “5”), “I” the individual’s role in the firm (“B” for “board member,” “M” for “manager,” or “G” for “general employee”), and “Y” a number serving to uniquely identify the individuals within the same role category of a firm. For example, the identifier “L2-B1” denotes that our data source is board member number 1 at the low-exposure firm LowCorp 2.

Strategy reconfiguration. In addition to evaluating strategies in times of environmental discontinuities, boards also engaged in *strategy reconfiguration*, which we define as activities through which boards manipulate strategies to influence strategic change. We specifically differentiate three groups of activities boards engage in as part of strategy reconfiguration: *approving*, *stimulating*, and *limiting* strategic change initiatives. These three groups include board activities that the literature on corporate governance has previously described, such as a board's role of advising, or hiring and firing managers (Johnson et al., 1996). However, as we shall show, in contrast to previous categorizations, our classification allows us to link board activities directly to strategic change. Within each category, the board reconfigures the firm's strategy by taking decisions on both investment and personnel. Which strategy reconfiguration activity boards focused on at any time depended on the outcome of strategy evaluation.

When boards felt that management initiatives were appropriate for dealing with the environmental changes they perceived, they focused on *approving change initiatives*. For example, after HighCorp 2 replaced its CEO in 2011, the firm's management "had the idea of strengthening the service business" (H2-B4). Since the board shared managers' evaluation that change was needed, its main activity was to approve management proposals (H2-B4). As the firm's CEO said, "The board almost ritually decides: 'Okay, we still support this strategy'" (H2-M1). We noticed that boards also indirectly approved strategic change initiatives through personnel decisions. For example, when HighCorp 3's CEO retired, the board ensured strategic continuity by selecting an internal successor who had been involved in implementing the CEO's changes.

When boards perceived the level of strategic change initiated by management as insufficient for dealing with the environmental discontinuity, they focused on *stimulating change initiatives*. Rather than approving initiatives driven by management, they actively drove change themselves. Stimulation took different forms, from "provoking curiosity and pointing out potential external

opportunities and new projects” (L1-B2) to “forcing management to look more closely at certain [new] topics” (H4-B1). Moreover, as several board members emphasized, bringing in new management personnel from another firm or industry can kick-start change. At LowCorp 2, for example, the former CEO would not concede that environmental change necessitated strategic change. Commenting on this type of issue, a board member (H2-B2) told us: “In that situation, all you can do is change the CEO. If someone won’t accept changing circumstances, they’ve got to go.” In some instances, a natural change in leadership was perceived as a timely opportunity to strengthen the executive team’s capacity for strategic change. For example, the boards of HighCorp 3, 4, and 5, as well as LowCorp 3 and 5 all brought in change-friendly CEOs following the retirement of former chief executives.

Finally, whenever boards perceived management as pushing change too hard, they began to engage in *limiting change initiatives*, by rejecting specific proposals or replacing management personnel who they saw as initiating too much change. One might assume that limiting would be less important when firms faced the need for far-reaching change. However, several boards in our sample ramped up their limiting as soon as more innovative top managers replaced those with little interest in change. At LowCorp 3, for example, after the retirement of the CEO, the board decided to hire a CEO who was more open to change. Indeed, the new CEO had “thousands of ideas” (L3-B1), proposing so many renewable-energy generation projects, as well as new business lines in photovoltaics and heat distribution, that the board had to step on the brake. As the new CEO told us, “Sometimes I’m a bit too much of a pioneer for the board. They have to hold me back rather than push me forward... For example, we had this opportunity to develop this wind project and then the board said: ‘No, not this on top of all the other stuff’” (L3-M1). Similar shifts from stimulating to limiting occurred after the replacement of the CEOs at HighCorp 1 and LowCorp 2.

Table 2 provides additional evidence for the different activities in which boards engaged as part of their roles of strategy evaluation and strategy reconfiguration. Moreover, Table 3 gives an overview of which of the three types of strategy configuration the boards in our sample focused on over time. (A more detailed table showing interview evidence supporting this categorization is available from the authors upon request.) The table shows that HighCorp boards were more strongly engaged in stimulating change initiatives than LowCorp boards. This finding appears plausible given that, overall, firms more exposed to the environmental discontinuity faced a more pressing need for strategic change. Nonetheless, Table 3 shows that even among those firms with a similar exposure to the environmental discontinuity, striking differences appeared in the focus of boards' activities. These differences support our finding that firms' exposure to the environmental discontinuity is not necessarily what drives boards' activities related to strategy reconfiguration. Instead, these activities depend on the boards' (subjective) evaluation of the firms' environment relative to boards' (subjective) evaluation of managerial change initiatives.

Insert Tables 2 and 3 about here

Ability to Judge Strategic Issues as a Precondition for Board Effectiveness

While boards routinely evaluate and reconfigure strategies, we find that their effectiveness in this regard strongly depends on their *ability of the board to judge strategic issues*. We define this ability as the routines, structures, and knowledge that allow boards to identify and understand topics of strategic importance, thereby enabling them to effectively perform strategy evaluation and reconfiguration. The finding that boards require expertise to effectively influence strategic decision making has previously been described in the literature (e.g., Oehmichen et al., 2017). However, as much of this literature is based on variance studies, it does not show in detail how board expertise shapes strategy-related activities and which role it plays in times of environmental discontinuities.

Therefore, we now describe in more detail how the ability to judge strategic issues affects boards' strategy-related activities.

First, the ability to judge strategic issues is critical for a board's ability to fulfill its role of strategy evaluation. As one board member pointed out, the board needs both routines and knowledge to "reasonably challenge the management.... There's always the question: What information do we get as a board of directors? What am I being fed? Do I notice when it's not enough? Do I notice if it's being somewhat channeled?" (H4-B2). Another board member agreed that boards had to deal with "matters that are highly complex, that you need to understand before you can take a decision" (H3-B2). As evaluating strategies is the critical prerequisite for deciding whether and how to reconfigure them, boards that cannot judge strategic issues may end up selecting means of strategy reconfiguration in an unsystematic way. For example, limited strategic acumen may lead to situations in which the board approves proposals without fully understanding the concomitant risks. As an example of how the lack of expertise can diminish the effectiveness of the board, a board member at LowCorp 2 reported that in 2009 and 2010, "Many proposals put to the board of directors were simply rubber-stamped. And there were things in there where one really had to say that we didn't understand them in depth" (L2-B1).

Second, boards' ability to judge strategic issues also determines how effectively they can stimulate strategic change as part of strategy reconfiguration. As several board members reported, stimulating change initiatives, in particular, required significant expertise and the right processes on the part of the board because such interventions went beyond diagnosing problems to suggesting detailed solutions. As one board member explained, "The board can be in a situation where it says, 'Okay, we want to take a step toward the new world.' But then the question arises, where can we get the largest profit, and in which country? And those are questions that are much more challenging than just approving the proposal to change" (H1-B4). Therefore, several board

members pointed out that being able to “actively drive topics... it is important to have the [corresponding] process in the board” (L1-B2) and that the “the board should be composed accordingly, and be multisided; and then lead the respective [critical] discussions” (H3-B2).

The Need for Renewing the Board’s Ability to Judge Strategic Issues in Times of Environmental and Strategic Change

While the board’s ability to judge strategic issues is a precondition of effectively governing strategic change, we found that, importantly, both environmental discontinuities and strategic change significantly undermined this ability. Even those firms not strongly exposed to the environmental discontinuity and with no need to engage in dramatic strategic shifts reported that changes in the environment made it more difficult for them to judge strategic issues. These difficulties emerged because the environmental discontinuity raised the uncertainty and complexity that boards needed to deal with. For example, as a member of LowCorp 3 stated, “Since the liberalization, complexity has increased dramatically. From my perspective, it’s extremely challenging just for the board to keep up [with this increasing complexity]” (L3-B3). The CEO of LowCorp 1 stressed that this complexity also had implications for the board’s processes:

In the old world, the machine was running, the dollars pouring in, the profits increasing.... And that’s easy to lead.... And now, there’s this brutal change, the challenges are much larger for the board. The sessions take four times as long, are four times more complex, we need to go four times as deep, need to check much more. Can you build this wind park in Sweden? Can you invest in land in Norway? In the old world, things got put on the table, and if they had a good EBIT, we said, “Yes, go ahead.” (H1-B4)

The situation was even more challenging for those firms that were strongly exposed to the environmental discontinuity, as they had to undergo rapid strategic change. The CEO of HighCorp 1, for example, stated that the firm was undergoing a “180-degree change,” which meant that some board members “are simply unable to cope with the situation, and that’s a fact.... I don’t want to

blame anyone. The market has changed and we simply need new competencies in the board today” (H1-M1). Board members of HighCorp 3 also reported that, due to the strategic change that the CEO initiated, the board “gets a huge document from management, a huge document that is then being discussed. And with all these technical questions, it’s quite challenging to say how you will go about it.... With the externally imposed energy transition and strategic change, suddenly the board is under much more pressure” (H3-B1). Indeed, several board members even reported that the environmental discontinuity together with the strategic change undermined the usefulness of their prior expertise and social network. One board member stressed:

If a firm changes, then by definition specific [personal] networks become less important and others more important. The classic example, which concerns all firms, is digitization: Most people’s old networks didn’t have anything to do with digitization. Most didn’t even know what digitization is.... Dealing with digitization requires completely new knowledge, new profiles, new networks, and that’s very important. (H4-B1)

Another board member concurred that “in the new energy world, the old networks don’t help you understand the current trends. They’re rather harmful” (L3-B1). These statements show that, even if boards initiate change, environmental and strategic change can undermine the value of board members’ human and social capital and reduce boards’ ability to judge strategic issues.

To uphold their roles of strategy evaluation and reconfiguration, boards therefore need to reestablish their ability to judge strategic issues as soon as they are confronted with increasing environmental and strategic change. For example, as one director of LowCorp 1 noted, “Particularly in these fast-changing times, it’s a must to have the right people on board and there has to be more dynamism in such a body.... The market changes, demand changes, and with that, the board needs to change” (L1-B2). Alluding to the urgency of renewing the ability to judge strategic issues once management initiates major strategic change, a director of HighCorp 4 stated, “I believe that the development of the board needs to continuously follow the management. Say

we try to develop an innovative autarchic system with heat pumps and solar, and management comes up with something totally crazy. Somehow, I need to be able to understand this... Otherwise, it doesn't work" (H4-B2). Table 4 provides additional evidence that environmental and strategic change raise challenges and require abilities to be renewed within the board.

Insert Table 4 about here

Board Self-Evaluation and Self-Reconfiguration as Means of Renewing Board Abilities

The finding that boards may lose their ability to effectively govern strategic change raises the question of how boards can renew their ability to judge strategic issues in times of environmental discontinuities. We find that boards rely mainly on themselves for this renewal. Generally, a board is established to increase and preserve owners' (i.e., shareholders') interests. Thus, in theory governance mechanisms give the firm's owners the ultimate control and the right to appoint (and dismiss) the board members who act on their behalf. Yet our interviews showed that owners can seldom take on this control function in a systematic way, for two main reasons. First, distributed ownership may make controlling and changing the board very difficult. As one board member pointed out, "In many firms, there is no majority shareholder" (H2-B4). However, as another board member explained, "The annual general meeting is not able to perform this monitoring and control function... it is a mere formal discharge based on the annual reports" (H3-B2). Other members agreed that the annual general meeting "cannot do this. The sheer size of the assembly means no decisions get taken. There is no control body above the board of directors" (L2-B3).

Second, even when a majority shareholder exerts control, owners frequently lack the institutionalized means through which they can influence firm strategies. One board member, for example, pointed out that an institutionalized process for board appointments existed in his firm. Yet "such [processes] are not competency-based" (H4-B1). Another acknowledged that the firm's

owners “often” do not provide clear guidance, and that it might take owners a long time to notice that the board needs replacing (L2-B1). Therefore, even in the case of a setup with an influential majority shareholder, a board member of HighCorp 3 remained skeptical about the shareholders’ supervision capacity vis-a-vis the board: “It [board supervision] doesn’t exist” (H3-B2).

This lack of oversight implies that, ultimately, whether boards are able to renew their ability to judge strategic issues is strongly contingent on processes within the board itself. We found that the corresponding processes show parallels with the roles boards play in influencing strategic change. Specifically, we identify two categories of activities that boards use to update their ability to judge strategic issues: *self-evaluation* and *self-reconfiguration*.

Self-evaluation. Self-evaluation refers to board activities aimed at assessing the board’s own strengths and weaknesses, and can take various forms, from informal assessments to more formal reviews, with or without external support. In HighCorp 1, for example, the new chair paid particular attention to self-evaluation early on, telling his board that he would “talk to his director colleagues about how they work [as a group]” and later implementing this process as a protocol (H1-M1). LowCorp 5’s board conducted a multi-day offsite event during which it reviewed and adjusted its core operational processes (L5-B3). A board member of LowCorp 1 reported that its board used a structured document to conduct an evaluation across both board and management: “Every three to four years, we make an anonymous assessment and evaluate the results. These results are subsequently published, and we try to make corrections based on them” (L1-B2).

Our findings suggest that self-evaluation was critical for board functioning in times of environmental discontinuities, as it served as a means of raising board members’ awareness of a lack of competencies or problems with certain board processes. A board member of HighCorp 2, for example, revealed that self-evaluation had a strong bearing on board recruitments: “We do an annual self-assessment. And we also get an assessment by the chair and he assesses us in return....

I believe that we have quite a good picture of the performance of individual board members. And this also led to the decision that two directors would leave and would not be replaced” (H2-B4). Similarly, the CEO of HighCorp 1 reported that self-evaluation formed the basis of a more fundamental board reform: “Self-evaluation is the most important thing. I think you need to start with this.... We noticed that we lacked the [required] competencies and that the board was way too big. One could see this quite clearly” (H1-M1).

Self-reconfiguration. Once a board has recognized a need to renew its ability to judge strategic issues, it can engage in self-reconfiguration—i.e. activities that directly enhance this ability and help the board regain its ability to govern strategic change. We identified four main self-reconfiguration activities in which boards engage in times of environmental discontinuities: *adaptation of composition, adaptation of size, learning and education, and adjustment of decision-making.* Embarking on these four activities did not necessarily require the board to have gone through a process of self-evaluation—since, for example, adaptation of composition might also be triggered by other factors, such as changes in ownership or the scheduled retirement of board members. However, if self-reconfiguration was to effectively improve the board’s ability to judge strategic issues, self-evaluation had to happen first.

The first self-reconfiguration activity, *adaptation of composition*, refers to all board activities aimed at systematically changing its own personnel reconfiguration. We observed that, to enhance their ability to judge strategic issues, boards deliberately brought in experts whom they deemed necessary during strategic change. As one board member pointed out, during such times it was important to “staff the board in such a way that it consists of different competencies, so it can tackle the challenge” (L2-B2). Another recalled that his firm’s board had decided “to bring in new forces that represent the new world, without piling up more knowledge” (H1-B1). In LowCorp 3, after a more exploratory CEO was in place, the board started “looking for folks who are experts

and have the ability to challenge management” (L3-M1). Several board members pointed out that their boards had developed board member competency profiles, to optimize the selection of future members (H1-B2, H1-M1, H3-B2, L3-B1). The competency profiles summarized the competencies required on the board, so that open positions could be filled in a systematic way.

The second self-reconfiguration activity, *adaptation of size*, refers to activities in which the board adjusts its own size, usually downwards, to enhance its agility in times of strategic change. As one board member emphasized, “[I]t’s easier to have a discussion in a smaller board. There’s less of a need to follow formal rules, and you can intervene more spontaneously as an individual member. The idea was to better realize the potential of individual members” (H2-B3). A member of another board agreed that “we’ve started reducing the size of the board, so we can really discuss issues. That hadn’t been possible in a body of 25 people. That just doesn’t work” (L2-B1). With many more issues suddenly on the table due to environmental discontinuity, several boards opted to reduce their numbers to foster discussions. For example, as the LowCorp 2 board chair reported, “We have decided to reduce the board from 26 to 13 people in 2015, and to nine in 2018, and we have made the first reduction to 18. It’s simply not manageable any longer, since complexity is getting so much greater” (H1-B2).

The third self-reconfiguration activity, *learning and education*, refers to the activities boards use to address knowledge gaps without replacing board members. These activities can be collective (e.g., in the form of joint training sessions, on-site visits, and workshops) or individual (e.g., in the form of reading or knowledge exchange with peers). Collective approaches were usually introduced to ensure that pertinent education was not left to directors’ own discretion (H2-B2). For example, HighCorp 4’s board set up an annual “education day” (i.e. workshop) early in the year for openly discussing critical topics and reviewing them in depth (H4-M1). Furthermore, the chair revealed that he “had just written a training concept for the board itself” (H4-B1),

including a structured agenda for the board to continuously advance firm-specific knowledge (e.g., readings, expert talks, study trips). At HighCorp 2, the chair oversaw the distribution of supplementary material in addition to the regular board-meeting documents that management prepared. The board of LowCorp 4 regularly went on on-site visits in order to enhance collective education. “On the one hand, these trips are technical, so the non-experts also get a sense... we look at every technology. For example, I wanted [the board] to look at brown coal... to have them see it for themselves.... On the other hand, [we look at] the latest developments, and always companies that have experience [with a certain technology], too” (L4-B2).

The fourth self-reconfiguration activity, *adjustment of decision making*, refers to activities aimed at adapting board processes to enable effective decision making and enhance the board’s ability to judge strategic issues in times of environmental discontinuities. Overall, our interviews revealed different ways in which boards dealt with the rising tide of information they faced in times of strategic change while avoiding the risk of poorer decision making. A director at LowCorp 1 reported that one way of handling increasing complexity was to heighten task separation and specialization within the board: “Today, I believe the board doesn’t always have to deal with every topic.... There should be board members responsible for specific topics so that the board as a group can focus on the essentials” (L1-B2). A prominent way of achieving this end lay in founding strategy committees that carefully screened strategic alternatives and reviewed strategic proposals before handing them over for the board for approval. Moreover, many boards switched from requiring unanimous approval for proposals to making decisions based on the majority principle. A manager of HighCorp 3 commented, “Especially when you enter new business fields, you simply need to take decisions more quickly.... And we’re on our way to finding a way to move faster. I mean, we can’t have a two-month decision process every time we make an acquisition” (H3-M2).

Summarizing our findings, Table 5 provides an overview of board activities related to self-evaluation and self-reconfiguration that we identified in our study.

Insert Table 5 about here

Lack of Board Self-Evaluation and Self-Reconfiguration as a Source of Organizational Inertia

While all interviewees agreed that board self-evaluation and self-reconfiguration were greatly important during environmental discontinuities, we found that the degree to which firms engaged in related activities strongly differed across firms and time (even across firms with the same exposure). The boards of HighCorp 2 and 4, and LowCorp 2, in particular, began reconfiguring themselves early, engaging in almost all the activities that boards can use to self-evaluate and self-reconfigure. The boards of HighCorp 1 and 5, and LowCorp 5 were initially passive but began engaging in some major reconfigurations in the last two years of the study period. Finally, the boards of HighCorp 3 and LowCorp 1, 3, and 4 remained passive throughout the period of change, showing limited efforts of self-evaluation and self-reconfiguration. For example, while board members of HighCorp 3 and LowCorp 4 agreed that self-evaluation was a wise idea, their boards had still not incorporated it (L4-B2). A HighCorp 3 board member conceded that education “would be a topic one could propose.... But do we do an educational trip with the board? No, we don’t do that” (H3-B1). In addition, board members at LowCorp 3 pointed out that in their experience replacing directors once they were on the board was “extremely rare” (L3-B2) and that “many directors cling to the tried and true” (L3-B1). Thus, as the board member admitted, “We are quite far from being a continuously improving board” (L3-B1).

At the firms that were less exposed to the environmental change, a lack of board self-evaluation and self-reconfiguration did not trigger major organizational inertia. The reason is that

these firms did not need to engage in radical change initiatives that would have required initiatives by the board or undermined the boards' ability to judge strategic issues. For example, although the board of LowCorp 1 was large, lacked clear competence profiles, and showed few changes in composition, the implications for the firm remained limited because it was not strongly exposed to the environmental discontinuity.

In contrast, HighCorp 1 to 5 were hit hard by the environmental discontinuity, making board self-evaluation and self-reconfiguration critical. As the boards of HighCorp 2 and 4 strongly engaged in these activities, they were able to govern the strategic change proactively. At HighCorp 1, 3, and 5, however, the lack of board self-evaluation and self-reconfiguration led to serious organizational inertia, since the boards actively opposed changes proposed by the management for a long time. As the CEO of HighCorp 1 explained:

Initially, a lot of the proposals were rejected by the board. I realized that this was due to a lack of knowledge [on the part of the board members].... Then we changed the chair of the board. That was a huge relief for me because I had been tilting at windmills for two years. It was hard because I just hadn't been able to make any progress although we needed to turn the company around by 180 degrees.... It took very long and a lot of education to get to where we are now. I don't want to go into more details. It took very long. (H1-M1)

Another example is HighCorp 5, where the board opposed any strategic changes for several years. Noticing as early as 2009 that the steep decline in electricity wholesale prices would pose a major threat to the firm, the management team suggested fundamental changes in the firm's strategy. Yet "the [board's] will to react strategically just wasn't there. As a result, everything we've done since 2009 has been in small, incremental steps" (H5-M1). According to the CEO, this reluctance was due to the board's not "realizing what's actually going on in this industry," "underestimating the impact," and not understanding "what the driving factors were" (H5-M1). By blocking managerial initiatives—in a similar way to what transpired at HighCorp 1 and 3—the board caused significant organizational inertia.

To convince the board of the need for major change, HighCorp 5's management team conducted workshops every two to three weeks for 18 months, as part of which it forced board members to "deal with the questions of where the sector is right now, how they see the development of the sector, what the key success factors are, and what different scenarios in energy policy and energy economics look like" (H5-M1). Although there was a "steep learning curve" (H5-B2) and the "understanding of the business model and the firm grew massively" (H5-M1), it became clear that "implementing the new strategy in the current constellation would not work" (H5-M1). Therefore, the CEO initiated a change in ownership to bring in board members who backed the new strategy of the top management team. That such a drastic step became necessary illustrates the powerful inertia that can result from a lack of board self-evaluation and self-reconfiguration. Indeed, for those firms that were highly exposed to the environmental discontinuity but lacked self-evaluation and self-reconfiguration (HighCorp 1, 3, and 5), we observe the sharpest decline in financial performance (measured as net income and return on assets) between 2009 and 2015 among all firms we studied.

Members' Self-interest and Board Chair's Actions and Experience as Antecedents of Self-Evaluation and Self-Reconfiguration

The striking differences across firms in terms of self-evaluation and self-reconfiguration raise the question of which board-internal factors drive or inhibit boards to engage in these activities. Our findings suggest that two main factors play a major role: board members' self-interest and the actions and experience of the board chair.

Board members' self-interest. Our study reveals a striking dilemma: While self-evaluation and self-reconfiguration are critical to maintaining the board's governance ability, these activities often conflict with the interests of the individual board member.

According to our interviews, board members joined boards for three main reasons: First, traditionally, “board mandates are prestigious” (L5-B1), since sitting on a board signals to others that the individual is part of a social elite. As one member reported, “You feel important as a board member and you also identify with the position: ‘I’m a board member of HighCorp 5’... There were dinners where you could bring your partner, and these official occasions were quite important to many board members” (H5-B3). In fact, several interviewees told us that before the energy transition, board positions had often been awarded to politicians and former executives “as a reward, for reasons of prestige—and less because someone could actually contribute something” (L1-B2). Another board member confirmed that positions were often not filled based on individuals’ skills and competences, but “given away as presents” (H1-B4).

Second, individuals became board members to gain monetary compensation. The board members of the firms we analyzed earned USD 20,000–1M per annum, depending on the size of the company. While several board members stressed that “monetary compensation is not the main driver” (H2-B2), all members we interviewed admitted that money “plays a role” (H2-B2). Especially before the environmental discontinuity, the workload of board members was fairly light, making a board mandate an attractive and lucrative part-time post. Indeed, one board member stressed that “if you don’t engage, if you don’t put too much effort into your mandate, it’s easy money” (H4-B1). In addition, several companies made use of “professional board members who are no longer employed by others—they make a living from being on boards.... They’re excellent people, but they’re [financially] dependent on their mandate” (L5-B1).

Third, apart from extrinsic motivations, individuals also joined boards because they “enjoyed shaping the strategy of a company in a sector that’s under pressure” (L3-B1) and “wanted to contribute something” (H4-B1). In the words of one director, “I have never gone looking for a mandate; I look for projects. And I join a board if I think that I can create value with my profile”

(H4-B1). Similarly, as another board member stressed, several board members were there because they “felt responsible” and “wanted to finish the task” they had started (H2-B2).

Our interviewees stressed that the extent to which individual board members were motivated by prestige, monetary compensation, or an intrinsic interest in shaping firm strategies strongly differed across individuals (L2-B2, H4-B1, L3-B1). All three motivations, however, served to limit board members’ interest in self-evaluation and self-reconfiguration. Engaging in critical self-evaluation would have required “questioning oneself” (L2-B1) and “acknowledging that one is wrong” (L2-B3), which went against board members’ self-conception as a social elite and influential individuals. Indeed, as a director of LowCorp 5 emphasized, “Recognizing wrong decisions, of course this can hurt—to realize failures, to clearly say that we didn’t do this well” (L5-B1), so that self-evaluation was rarely in the interest of individual board members.

In addition, and more importantly, self-evaluation bore the risk that in the course of the process it would become apparent that board members were ill-equipped to deal with the environmental and strategic changes, such that self-reconfiguration would become necessary. Since this might have resulted in members losing their mandate—and, therefore, their prestige, compensation, and ability to shape strategies—board members had little incentive to critically question the board’s activities. As one put it, “Nobody really likes to make themselves obsolete and admit that, ‘Actually, I’m no longer of much value [to the board]’” (L2-B3).

As a result, neither self-evaluation nor self-reconfiguration were usually driven by ordinary board members. A director of HighCorp 2 vividly summarized the resulting dilemma: “We actually all agreed that we needed to reduce the size [of the board], but when it came to actually doing it, it got quite tricky. I mean, that’s clear, because nobody actually wanted to leave voluntarily” (H2-B3). Another board member explained that this dilemma was caused by board members’ self-interest:

If board members were strictly motivated in such a way that they would stay on the board for as long as they think they are useful, this problem [of boards not being able to change their composition] would not emerge. The problem is that there are other motives. For some board members it's a matter of prestige to be on the board. And that doesn't simply disappear overnight.... I would say that it's a problem that every board has. Not every board member has this selfless attitude of, "When I'm no longer of any use to the firm, I go." In fact, I believe that such profiles are very rare. (H4-B1)

Referring to the industry as a whole, a board member of LowCorp 5 agreed that "boards have realized that they need to reduce their size. But I'm skeptical about whether board members will voluntarily vacate their positions. I would call it 'protection of vested interests'" (L5-B1).

Board members' personal interests also conflicted with the need for learning and adjustments in decision-making. As a LowCorp 2 board member emphasized, whether an individual member engaged in learning was "a question of attitude: 'What am I willing to do for my mandate? Am I willing to take a look at the sector, to get involved, to do benchmarking, gather information, etc.?' Well, the willingness of every individual director to educate themselves, to keep themselves up to date, that's important" (L2-B3). Investing in personal learning and initiating major changes in decision-making processes would have required members to spend significantly more effort on their job. In the words of one board member, "there are many new influences that force us to engage in deeper thinking, and that takes time.... I need to have the time for my mandate. Being on the board is no longer just about prestige and money; it's actually hard work" (L2-B1).

Yet several interviewees reported that some board members—especially those who had been in post before the environmental discontinuity—had signed up on a part-time basis, and were accustomed to fulfilling their duties with limited temporal effort and without much risk of taking wrong decisions. Therefore, many were unwilling, or unable, to spend the necessary time and effort to educate themselves or stimulate changes in board processes. One board member stressed that "learning the facts takes time.... Many boards are composed of board members who have mandates

in several boards simultaneously. That's great for the network, but it's also problematic, because these people don't have the time to go into the necessary detail" (L2-B1). One CEO confirmed that "the willingness to learn wasn't there. Whenever I sent documents [with additional information], board members complained that it was too much, that they couldn't read it all" (H1-M1).

Board chair actions and experience. Given that individual board members faced little incentive to engage in self-evaluation and self-reconfiguration, whether boards performed these activities often hinged on the actions and expertise of the board chair. In terms of self-evaluation, a board member at LowCorp 2 reported that "only after the chair of the board changed was there any impetus to think about what works [in the board] and what doesn't" (L2-B3). Similarly, board chairs often were the main drivers of adjustments of board composition, adjustments in size, collective learning, and adjustments in decision-making. For example, a board chair expressed that if a board member needs to be replaced, "It's the board chair who needs to get active and talk to the respective member. That's a normal leadership role in a team" (H4-B1). Other board members noted that "it depends on the board chair what happens in terms of education.... The chair needs to point to interesting publications, presentations, or courses" (L4-B1). As an example that board chairs were also the main driver of adjustments in decision-making, the chair at HighCorp 4 explained that he had implemented a structured process that forced the board "to maintain a certain limit to the depth of involvement, so it doesn't descend into operational topics" (H4-B1).

Overall, all interviewees concurred that, as "the leader of the company" (L3-B1), "the board chair carries a special responsibility" (H2-B4), and that "the board chair has a special role, which encompasses making sure that the board works" (H4-B1). As a result, as one board chair noted, "When there are things in the board that need to be improved or corrected, then the chair needs to take the initiative. Because, if the chair doesn't do it, no one does—it's the only role that institutionally extends beyond the board" (H4-B1). The same chair, however, suggested that

instead of conducting the processes of self-evaluation or self-reconfiguration themselves, board chairs could delegate related activities to committees. For example, in several of the boards we studied, the chair formed so-called “nomination committees,” which planned the succession and replacement of both managers and board members. In this process, nomination committees usually “developed the competency profiles, which indicate who we need as a board, and were also responsible for finding and evaluating promising candidates. And usually, the board chair is also part of the nomination committee.... That’s quite important in changing the board” (H2-B2).

When initiating board self-evaluation and self-reconfiguration, board chairs often drew on tacit knowledge and experience they had gained in previous positions as CEOs or board chairs in other companies. In fact, we noted that changes of chair served as the main channel of knowledge spillovers related to practices of self-evaluation and self-reconfiguration across boards. While many board members could name individual routines or activities their own board was engaging in, many had not yet realized the importance of board self-evaluation and self-reconfiguration, had thus not tried to explicitly formulate the ways through which boards could adjust, and also lacked insights into the practices of other boards. Indeed, our interviewees stressed that “how other boards work, that’s not transparent” (L5-B1, H4-B1) and that “boards are black boxes; you don’t really know what’s going on inside” (H3-B1). This lack of knowledge spillovers on the part of board members was due to the fact that “board practices are hard to grasp” (H3-B1), such that boards did not conduct systematic benchmarking. In the words of a board member, “You don’t meet members of other boards to discuss how they do it” (H2-B1). Moreover, as a board chair reported, since utilities had been in a comfortable position for a long time, there had been no real need to gain insights into other boards, “since you could go with your tried and tested methods and ignore best practices without being punished for it” (H4-B1).

Given the lack of other spillover channels, the board chairs of those companies that had implemented multiple practices for self-evaluation and self-reconfiguration primarily drew on their own prior experience at other firms, either as board members or CEOs. For example, as HighCorp 4's board chair pointed out, having led a board before, he "knew what makes for a good board. And that's what I tried to implement [when I started at the new board].... What's important is experience as a leader" (H4-B1). A board member at HighCorp 4 confirmed that the chair "possesses much experience from previous boards. He approaches the topics [of self-evaluation and self-reconfiguration] in a very systematic way" (H4-B3). The vice-chair of LowCorp 2, who was also active on several other boards, agreed that "there's a lot of things that you can see in other boards... There are best practices that you can bring from other boards into your own..." (L2-B2). In this sense, new routines for self-evaluation and self-reconfiguration often resulted from changes in board chairs, who used their tacit knowledge to overcome board members' self-interest and implement self-evaluation and self-reconfiguration in a top-down fashion. In those cases where the firms were strongly exposed to the environmental discontinuity and lacked an experienced board chair—i.e., HighCorp 1, 3, and 5—the boards lost their ability to govern strategic change and contributed to organizational inertia. Table 6 presents additional interview evidence for the important role that board members' self-interest and the actions and experience of the board chair played for board self-evaluation and self-reconfiguration.

Insert Table 6 about here

Emerging Theory Framework

In summarizing our findings, Figure 1 shows the emergent theory framework that illustrates the board-internal challenges and dynamics in times of environmental discontinuities. By highlighting

the factors that shape when boards help or hinder strategic change, this framework helps explain the conditions under which boards contribute to organizational inertia.

Insert Figure 1 about here

We find that boards play an important role for strategic change (see number 4 in the figure) in times of environmental discontinuities (1) as they engage in strategy evaluation (2) and strategy reconfiguration (3).⁹ A fundamental enabler of effective deployment of both strategy evaluation and reconfiguration, however, is boards' ability to judge strategic issues (5). If boards are unable to judge strategic issues (i.e., they lack the expertise, processes, and composition to independently evaluate a strategic topic to form and convey a conclusion), they cannot systematically monitor the firm's exposure to environmental discontinuities and its strategic change to evaluate the fit between the firms' environment and strategy as part of their strategy evaluation role (2). Moreover, since strategy evaluation triggers and shapes strategy reconfiguration, boards that cannot judge strategic issues may lose their ability to systematically reconfigure strategies (3). For example, they may limit (3c) rather than approve (3a) strategic changes, despite the need for change. Moreover, the ability to judge strategic issues is critical for making concrete suggestions when stimulating change (3b).

While the ability to judge strategic issues (5) is therefore important to effectively trigger and shape strategic change (4) during environmental discontinuities, we find that both environmental discontinuities (1) and strategic change (4) reduce this very ability. Environmental discontinuities and strategic change lead to a situation where a board increasingly faces novel issues that prevent it from judging strategic issues effectively. To mitigate the reduced ability to judge

⁹ In this sense, strategic change is not directly triggered by environmental discontinuities, but hinges on the evaluation of the firms' environment, current strategy, and strategic proposals by the management, as well as the actions boards take based on their evaluation. This is why, although strategic change is ultimately shaped by changes in the environment, in the framework we do not show an arrow directly connecting environmental discontinuities and strategic change.

strategic issues, boards need to renew this ability in times of environmental discontinuities so they do not delay strategic change and become a source of organizational inertia.

However, while boards can trigger initiatives at the top-management level, no institutionalized governance body exists within the firm for triggering or systematically overseeing the renewal of board abilities. Therefore, boards must engage in self-evaluation (6) and self-reconfiguration (7). As part of self-evaluation, a board evaluates its ability to judge strategic issues to identify the need to renew this ability during critical times. Self-reconfiguration, in turn, comprises all activities that help the board increase this ability. We identify four such components of self-reconfiguration: adaptation of composition (7a); adaptation of size (7b); learning and education (7c); and adjustment of decision-making (7d). Moreover, we show that effective self-reconfiguration is triggered and shaped by self-evaluation and that boards that do not engage in these two activities contribute to organizational inertia and a continued decline in organizational performance.

Given important differences in the extent to which the boards of firms in our sample engage in self-evaluation and self-reconfiguration, we also provide initial evidence on the antecedents of both activities. Specifically, we find that both activities are strongly shaped by board members' self-interest, as well as the actions and experience of the board chair (8). Importantly, engaging in self-evaluation and self-reconfiguration frequently runs counter to the interests of individual board members, as these activities may reveal unpleasant realities or even make board members superfluous. Consequently, self-evaluation and self-reconfiguration are often initiated by board chairs, who implement routines based on their prior experience as CEOs or on other boards.¹⁰

¹⁰ One might assume environmental discontinuities or strategic change lead directly to board self-reconfiguration. However, our findings suggest that, at least in the short run, whether boards engage in systematic self-reconfiguration is primarily a function of board members' self-interest and the actions taken by the board chair. The fact that environmental discontinuities and strategic change do not directly drive changes in boards explains why boards may experience a lack of ability to judge strategic issues, which may cause organizational inertia in times of environmental change.

DISCUSSION

Prior studies indicate that boards play an important role for strategic change and have provided considerable insights into when boards get involved in strategy-related activities. Thus far, however, little is known about the challenges and dynamics of boards in times of environmental discontinuities. With this paper, we draw on unique data from interviews with board members in the Swiss electricity industry to open up the black box of boards and study how they contribute to organizational inertia. In the following, we explain our contributions in more detail.

Boards as a Source of Organizational Inertia

As its main contribution, our study highlights boards as a source of inertia, thereby contributing to an emerging stream of research that questions the predominant view in the corporate-governance literature that boards are a source of change and act in the interest of owners (Desai, 2016). We show how, during environmental discontinuities, boards may lose their ability to judge strategic issues, requiring them to engage in a process of self-evaluation and self-reconfiguration. Yet we observe that board members face a dilemma: Engaging in self-evaluation and self-reconfiguration may reveal weaknesses and past mistakes, and entail reductions in board size and changes in composition. Thus, while self-evaluation and self-reconfiguration are critical to maintaining the board's governance ability, these activities often conflict with the interests of the individual board members themselves, which may lead to organizational inertia.

The finding that changes in boards may conflict with board members' self-interest is important, because it extends and challenges existing findings in the literature on agency theory. This literature stresses the important role of boards in preventing the negative consequences that may result from managerial conflicts of interest, and discusses ways to design managerial compensation and organizational structures to ensure managers act in the owners' interests rather

than their own (Eisenhardt, 1989a). Our study shows that environmental discontinuities may lead to situations in which board members themselves face conflicts of interest that prevent them from engaging in self-evaluation and self-reconfiguration. Given that these two processes are crucial for effective corporate governance, our study thus raises the question of how firms can deal with these conflicts of interest, which have the potential to harm firm performance.

By shedding light on the role of board members' self-interest, our study also advances recent work on the micro-foundations of boards that has started to investigate board members' motivations. In a recent review of the literature on corporate governance, Hambrick et al. (2008: 384) stated that "[a] particularly intriguing question concerns directors' motivations to even be on corporate boards in the first place. Top executives have several very clear motivations to rise to a firm's highest echelons (wealth, power, and prestige being most obvious), but it is largely unclear why outside directors serve on boards. Until we understand directors' motives, we will have great difficulty in comprehending board processes or effectiveness." By showing that board members are motivated by prestige, monetary compensation, and an intrinsic motivation to shape firm strategies, our work helps fill this gap and complements existing studies that have begun to investigate the motivations of board members using identity theory (Hillman et al., 2008).

In addition to providing a new perspective to the literature on corporate governance, our study both challenges and complements existing views in the literature on strategic management. This literature has long studied the source of organizational inertia and how firms can adapt to changes in their environment (Romanelli & Tushman, 1994; Venkatraman & Camillus, 1984). Studies suggest that firms are often impeded from adapting in a timely manner by inertia resulting from managerial cognition, a lack of incentive to change, or the difficulty of redeploying firm resources and capabilities. For example, while Gilbert (2005) shows that firms experience resource and routine rigidities, Kaplan (2008) demonstrates that firm responses to environmental

discontinuities may be delayed by a lack of incentives, capabilities, and managerial attention. Tripsas and Gavetti (2000) find that even when firms do have the necessary capabilities, they may fail to adapt to environmental discontinuities due to biases in managerial cognition.

Our study sheds new light on these studies by pointing to boards of directors as an additional—and potentially more fundamental—source of organizational inertia. Given that boards can initiate strategic changes and replace management, they have powerful tools at their disposal that allow them to deal with lower-level inertia. Thus, resource inertia or cognitive biases among managers might not be problematic *per se* if the board notices and deals with them promptly and appropriately. Our study shows, however, that environmental changes not only pose major problems for managers, but also undermine boards' ability to effectively engage in corporate governance. As a result, boards can deal with lower-level inertia in times of environmental discontinuities only if they engage in self-evaluation and self-reconfiguration, which are usually initiated by the board chair. Our study therefore suggests that a lack of board self-evaluation and self-reconfiguration might be a major source of organizational inertia that has been under-studied in the literature on strategic management so far.

Board Capital, Evolution, and Power

In addition to highlighting the role of boards for organizational inertia, our study generates rich insights into board-internal processes, which allow us to make several additional, more specific contributions to important debates in the literature on corporate governance.

Board capital. First, by demonstrating how environmental discontinuities undermine boards' ability to judge strategic issues, our study represents a first step toward a much-needed dynamic perspective on board human and social capital (Hillman & Dalziel, 2003). Scholars building on resource-dependence theory have pointed out that board expertise and social ties are

important for the effective governance of strategies (Carpenter & Westphal, 2001; Oehmichen et al., 2017), and that their usefulness depends on the firm's context (Krause et al., 2013; McDonald et al., 2008) as well as the breadth and depth of board capital (Haynes & Hillman, 2010).

Our work extends these findings by highlighting that the value of boards' human and social capital may change over time. Specifically, according to our interviews, in times of environmental discontinuities, existing expertise and social ties that allow boards to govern strategies effectively may become useless or even become burdensome as firms undergo environmental or strategic change. This is because old ties and expertise may lead to a situation where board members take decisions based on biased or outdated information. Studies in the field of organizational learning have previously shown how capabilities may turn into core rigidities in times of change (Leonard-Barton, 1992). However, thus far this finding has received insufficient attention in the literature on corporate governance.

Board evolution. Second, our study provides novel insights into the mechanisms through which boards adjust over time to deal with environmental discontinuities. The literature stresses that environmental changes require boards to adjust, but mostly focuses on board composition as an externally observable adjustment mechanism (Golden & Zajac, 2001; Judge & Zeithaml, 1992; McNulty & Pettigrew, 1999). Answering calls to examine the learning or evolutionary processes within boards (Gabrielsson & Huse, 2004; Shen, 2003), we provide deep insights into the many activities that boards engage in to maintain their capacity to effectively evaluate and reconfigure strategies, which we cluster into self-evaluation and self-reconfiguration. We find that changing board composition is only one of several mechanisms through which boards can adjust to changes in the environment—suggesting that other mechanisms, such as individual learning, may partially compensate for static composition. Moreover, our study suggests that changes in composition may be of limited effectiveness if they are not accompanied by changes in decision-making and size. In

this sense, our study represents a departure from studies that have focused on individual, externally observable characteristics of boards when studying board adjustments, toward understanding adjustment as consisting of multiple board-internal elements that need to work together for board adjustments to be successful.

We also provide a new perspective on existing work that has studied board-external antecedents of self-evaluation and self-reconfiguration. Previous research has concentrated on studying the role of organizational performance, changes in ownership, and the CEO as drivers of changes in board composition (Boeker & Goodstein, 1991; Hambrick et al., 2008). We show that owners are rarely in a position to systematically renew board abilities in times of change, as they lack insights into board processes and recruit board members in line with their own interests, rather than those of the board as a whole. Although managers may also trigger self-evaluation and self-reconfiguration, if they drive board renewal, there is a risk that the board loses its critical independent governance function.

By highlighting the role that board self-evaluation and self-reconfiguration play in effective governance, our study may also help reconcile inconsistencies in the literature on the relationship between board characteristics and firm performance (Dalton et al., 1999; Haynes & Hillman, 2010). Much previous research assumes that one can directly infer the effectiveness of a board from its characteristics, such as demographic composition or size (Gabrielsson & Huse, 2004). Our findings suggest that, particularly in more dynamic environments, which types of board are most effective may depend less on the board's static characteristics and more on its ability to evaluate and adapt these characteristics to environmental changes. In fact, in our study, those firms that that lacked self-evaluation and self-reconfiguration suffered the sharpest decline in financial performance.

Board power. Third, by highlighting the important role the board chair plays in corporate governance, our study also contributes to the literature investigating the role of board power. The

extant literature stresses that the power of the board decisively shapes patterns of interaction with management (Pearce & Zahra, 1991) and board effectiveness (Golden & Zajac, 2001). However, studies have yet to explicate the factors that determine the relative power balance between management and the board. For example, Pearce and Zahra (1991: 151) state that “a question remains regarding the antecedents of the board-CEO power positions... Do boards become more powerful when the firm’s environment becomes more complex or volatile?” Our findings suggest that the board’s power *vis-à-vis* management is strongly related to the board chair, who initiates self-evaluation and self-reconfiguration, thereby ensuring that the board can still critically evaluate strategic proposals and reconfigure strategies. Indeed, we find that when board chairs failed to initiate self-evaluation and self-reconfiguration, boards became very susceptible to managerial impression management, and ended up rubberstamping proposals during environmental change. By highlighting the role of the board chair in board self-evaluation and self-reconfiguration, our study answers recent calls for a “substantive qualitative investigation of the chair’s role and responsibilities” (Krause, Semadeni, & Cannella, 2014: 281).

Limitations and Future Research

Our study has several limitations that lend themselves as avenues for future research. First, we chose to study the Swiss electricity industry, a setting that allowed us to investigate in detail how boards govern strategic change in times of environmental discontinuities. While the specificities of the setting represent a strength from the perspective of theoretical sampling (Siggelkow, 2007), they raise the question of how much our findings are generalizable to firms in other sectors or countries (Oehmichen et al., 2017). The electricity sector is highly regulated, which may affect board dynamics. Moreover, the responsibilities of boards of directors differ across countries

(Forbes & Milliken, 1999). Future studies should therefore build upon our findings and investigate board mechanisms during environmental change in other national and industrial contexts.

A second potential limitation of our approach lies in the fact that we cannot directly observe board activities in real time. As is well documented in the literature, interview data may be subject to biases from retrospective sensemaking and impression management (Eisenhardt & Graebner, 2007). To avoid these biases, we relied on multiple data sources and informants (including outsiders), allowing us to validate and triangulate statements. In fact, we were surprised to see how openly and consistently board members spoke about weaknesses in boards and the dilemmas boards faced in times of change, which may be partly explained by the fact that at the time of our study all firms in the electric utility had realized that “business as usual” was no longer an option. Although we are thus very confident that our study paints an accurate picture of board challenges and dynamics in the Swiss electricity industry during the energy transition, we call for future studies that rely on ethnographic techniques to study boardroom processes in real time over extended periods. In this context, we also see particular merit in studies that take a micro perspective to shed additional light on how individual-level factors, such as the personal motivation or interests of board members, shape board dynamics and organizational outcomes. For example, while in our case personal interests prevented boards from renewing their ability to judge strategic issues, in other contexts personal interests may lead boards to oppose strategic changes, even though the board possesses the necessary abilities to judge initiatives. Future research that studies micro-level phenomena in boards may help shed more detailed light on the various ways through which boards contribute to organizational inertia.

Third, after providing initial insights into the antecedents of boards’ self-evaluation and self-reconfiguration, we call for future research that investigates why some boards engage more strongly in these activities than others. Our findings suggest that the board chair and the experiences

of individual board members are important for developing the necessary routines and tools. Although first studies have started to examine the roles of the chair (Krause, 2017), several questions remain: How, if the board chair plays such a crucial role, do firms or owners select and change the chair? How is board self-evaluation and self-reconfiguration related to the firm's history, the background of board members, or the firm's ownership structure? What incentives and processes can firms use to prevent potentially harmful consequences from board members' conflicts of interest? Answering these questions holds great potential to extend our findings and derive important implications for firms attempting to navigate environmental discontinuities. Our findings raise intriguing questions about ways of designing effective corporate governance in such demanding times. We therefore see much potential for future research that builds upon our study to investigate the role of boards as a source of both change and organizational inertia.

REFERENCES

- Alexander, J. A., Fennell, M. L., & Halpern, M. T. 1993. Leadership instability in hospitals: The influence of board-CEO relations and organizational growth and decline. *Administrative Science Quarterly*, 38(1): 74-99.
- Almandoz, J. & Tilcsik, J. 2016. When experts become liabilities: Domain experts on boards and organizational failure. *Academy of Management Journal*, 59(4): 1124-1149.
- Arthaud-Day, M. L., Certo, S. T., Dalton, C. M., & Dalton, D. R. 2006. A changing of the guard: Executive and director turnover following corporate financial restatements. *Academy of Management Journal*, 49(6): 1119-1136.
- Barr, P. S. 1998. Adapting to unfamiliar environmental events: A look at the evolution of interpretation and its role in strategic change. *Organization Science*, 9(6): 644-669.
- Baysinger, B. & Hoskisson, R. E. 1990. The composition of boards of directors and strategic control: Effects on corporate strategy. *Academy of Management Review*, 15(1): 72-87.
- Boeker, W. & Goodstein, J. 1991. Organizational performance and adaptation: Effects of environment and performance on changes in board composition. *Academy of Management Journal*, 34(4): 805-826.
- Boulton, W. R. 1978. The evolving board: A look at the board's changing roles and information needs. *Academy of Management Review*, 3(4): 827-836.
- Boyd, B. 1990. Corporate linkages and organizational environment: A test of the resource dependence model. *Strategic Management Journal*, 11(6): 419-430.
- Boyd, B. K. 1995. CEO duality and firm performance: A contingency model. *Strategic Management Journal*, 16(4): 301-312.
- Carpenter, M. A. & Westphal, J. D. 2001. The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. *Academy of Management Journal*, 44(4): 639-660.
- Christensen, C. M. & Rosenbloom, R. S. 1995. Explaining the attacker's advantage: Technological paradigms, organizational dynamics, and the value network. *Research Policy*, 24(2): 233-257.
- Canyon, M. J. & Peck, S. I. 1998. Board control, remuneration committees, and top management compensation. *Academy of Management Journal*, 41(2): 146-157.
- Daily, C. M. 1996. Governance patterns in bankruptcy reorganizations. *Strategic Management Journal*, 17(5): 355-375.
- Daily, C. M. & Schwenk, C. 1996. Chief executive officers, top management teams, and boards of directors: Congruent or countervailing forces? *Journal of Management*, 22(2): 185-208.
- Daily, C. M., Dalton, D. R., & Cannella, A. A. 2003. Corporate governance: Decades of dialogue and data. *Academy of Management Review*, 28(3): 371-382.
- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. 1999. Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6): 674-686.
- Desai, V. M. 2016. The behavioral theory of the (governed) firm: Corporate board influences on organizations' responses to performance shortfalls. *Academy of Management Journal*, 59(3): 860-879.
- Desender, K. A., Aguilera, R. V., Crespi, R., & García-Cestona, M. 2013. When does ownership matter? Board characteristics and behavior. *Strategic Management Journal*, 34(7): 823-842.
- Dowell, G. W., Shackell, M. B., & Stuart, N. V. 2011. Boards, CEOs, and surviving a financial crisis: Evidence from the internet shakeout. *Strategic Management Journal*, 32(10): 1025-1045.

- Eisenhardt, K. M. 1989a. Agency theory: An assessment and review. *Academy of Management Review*, 14(1): 57-74.
- Eisenhardt, K. M. 1989b. Building theories from case study research. *Academy of Management Review*, 14(4): 532-550.
- Eisenhardt, K. M. & Graebner, M. E. 2007. Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1): 25-32.
- Fleiss, J. L., Levin, B., & Paik, M. C. 2003. *Statistical Methods for Rates and Proportions*. Hoboken, NJ: John Wiley & Sons.
- Forbes, D. P. & Milliken, F. J. 1999. Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, 24(3): 489-505.
- Gabrielsson, J. & Huse, M. 2004. Context, behavior, and evolution: Challenges in research on boards and governance. *International Studies of Management & Organization*, 34(2): 11-36.
- Garg, S. & Eisenhardt, K. 2016. Unpacking the CEO-board relationship: How strategy-making happens in entrepreneurial firms. *Academy of Management Journal*, forthcoming.
- Gibbert, M., Ruigrok, W., & Wicki, B. 2008. What passes as a rigorous case study? *Strategic Management Journal*, 29(13): 1465-1474.
- Gilbert, C. G. 2005. Unbundling the structure of inertia: Resource versus routine rigidity. *Academy of Management Journal*, 48(5): 741-763.
- Golden, B. R. & Zajac, E. J. 2001. When will boards influence strategy? Inclination x power = strategic change. *Strategic Management Journal*, 22(12): 1087-1111.
- Goodstein, J. & Boeker, W. 1991. Turbulence at the top: A new perspective on governance structure changes and strategic change. *Academy of Management Journal*, 34(2): 306-330.
- Goodstein, J., Gautam, K., & Boeker, W. 1994. The effects of board size and diversity on strategic change. *Strategic Management Journal*, 15(3): 241-250.
- Hambrick, D. C. & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2): 193-206.
- Hambrick, D. C. & D'Aveni, R. A. 1992. Top team deterioration as part of the downward spiral of large corporate bankruptcies. *Management Science*, 38(10): 1445-1466.
- Hambrick, D. C., Werder, A. v., & Zajac, E. J. 2008. New directions in corporate governance research. *Organization Science*, 19(3): 381-385.
- Haynes, K. T. & Hillman, A. 2010. The effect of board capital and CEO power on strategic change. *Strategic Management Journal*, 31(11): 1145-1163.
- Hendry, K. & Kiel, G. C. 2004. The role of the board in firm strategy: Integrating agency and organisational control perspectives. *Corporate Governance: An International Review*, 12(4): 500-520.
- Hermalin, B. E. & Weisbach, M. S. 2003. Boards of directors as an endogenously determined institution: A survey of the economic literature. *Economic Policy Review*, 9(2003): 7-26.
- Hillman, A. J., Cannella, A. A., & Paetzold, R. L. 2000. The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management Studies*, 37(2): 235-256.
- Hillman, A. J. & Dalziel, T. 2003. Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *Academy of Management Review*, 28(3): 383-396.
- Hillman, A. J., Nicholson, G., & Shropshire, C. 2008. Directors' multiple identities, identification, and board monitoring and resource provision. *Organization Science*, 19(3): 441-456.
- Hofer, C. W. & Schendel, D. 1978. *Strategic Formulation: Analytical Concepts*. St. Paul, MN: West Publishing Company.

- Jensen, M. C. & Meckling, W. H. 1976. Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4): 305-360.
- Johnson, J. L., Daily, C. M., & Ellstrand, A. E. 1996. Boards of directors: A review and research agenda. *Journal of Management*, 22(3): 409-438.
- Johnson, R. A., Hoskisson, R. E., & Hitt, M. A. 1993. Board of director involvement in restructuring: The effects of board versus managerial controls and characteristics. *Strategic Management Journal*, 14(S1): 33-50.
- Judge, W. Q. & Zeithaml, C. P. 1992. Institutional and strategic choice perspectives on board involvement in the strategic decision process. *Academy of Management Journal*, 35(4): 766-794.
- Kaplan, S., Murray, F., & Henderson, R. 2003. Discontinuities and senior management: Assessing the role of recognition in pharmaceutical firm response to biotechnology. *Industrial and Corporate Change*, 12(2): 203.
- Kaplan, S. 2008. Cognition, capabilities, and incentives: Assessing firm response to the fiber-optic revolution. *Academy of Management Journal*, 51(4): 672-695.
- Keck, S. L. & Tushman, M. L. 1993. Environmental and organizational context and executive team structure. *Academy of Management Journal*, 36(6): 1314-1344.
- Kelly, D. & Amburgey, T. L. 1991. Organizational inertia and momentum: A dynamic model of strategic change. *Academy of Management Journal*, 34(3): 591-612.
- Krause, R., Semadeni, M., & Cannella, A. A. 2013. External COO/presidents as expert directors: A new look at the service role of boards. *Strategic Management Journal*, 34(13): 1628-1641.
- Krause, R., Semadeni, M., & Cannella, A. A. 2014. CEO duality: A review and research agenda. *Journal of Management*, 40(1): 256-286.
- Krause, R. 2017. Being the CEO's boss: An examination of board chair orientations. *Strategic Management Journal*, 38(3): 697-713.
- Leonard-Barton, D. 1992. Core capabilities and core rigidities: A paradox in managing new product development. *Strategic Management Journal*, 13(S1): 111-125.
- Lynall, M. D., Golden, B. R., & Hillman, A. J. 2003. Board composition from adolescence to maturity: A multitheoretic view. *Academy of Management Review*, 28(3): 416-431.
- Mace, M. L. 1971. *Directors: Myth and Reality*. Boston, MA: Harvard University Graduate School of Business Administration.
- McDonald, M. L., Westphal, J. D., & Graebner, M. E. 2008. What do they know? The effects of outside director acquisition experience on firm acquisition performance. *Strategic Management Journal*, 29(11): 1155-1177.
- McNulty, T. & Pettigrew, A. 1999. Strategists on the board. *Organization Studies*, 20(1): 47-74.
- Meyer, A. D., Brooks, G. R., & Goes, J. B. 1990. Environmental jolts and industry revolutions: Organizational responses to discontinuous change. *Strategic Management Journal*, 11: 93-110.
- Mizruchi, M. S. 1983. Who controls whom? An examination of the relation between management and boards of directors in large American corporations. *Academy of Management Review*, 8(3): 426-435.
- Mizruchi, M. S. & Stearns, L. B. 1988. A longitudinal study of the formation of interlocking directorates. *Administrative Science Quarterly*, 33(2): 194-210.
- Oehmichen, J., Schrapp, S., & Wolff, M. 2017. Who needs experts most? Board industry expertise and strategic change—a contingency perspective. *Strategic Management Journal*, 38(3): 645-656.

- Pearce, J. A. & Zahra, S. A. 1991. The relative power of CEOs and boards of directors: Associations with corporate performance. *Strategic Management Journal*, 12(2): 135-153.
- Pettigrew, A. & McNulty, T. 1995. Power and influence in and around the boardroom. *Human Relations*, 48(8): 845-873.
- Pfeffer, J. 1972. Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly*, 17(2): 218-228.
- Pugliese, A., Bezemer, P. J., Zattoni, A., Huse, M., Van den Bosch, F. A., & Volberda, H. W. 2009. Boards of directors' contribution to strategy: A literature review and research agenda. *Corporate Governance: An International Review*, 17(3): 292-306.
- Rindova, V. P. 1999. What corporate boards have to do with strategy: A cognitive perspective. *Journal of Management Studies*, 36(7): 953-975.
- Romanelli, E. & Tushman, M. L. 1994. Organizational transformation as punctuated equilibrium: An empirical test. *Academy of Management Journal*, 37(5): 1141-1166.
- Selznick, P. 1949. *TVA and the Grass Roots: A Study of Politics and Organization*: University of California Press.
- Shen, W. 2003. The dynamics of the CEO-board relationship: An evolutionary perspective. *Academy of Management Review*, 28(3): 466-476.
- Shivdasani, A. & Yermack, D. 1999. CEO involvement in the selection of new board members: An empirical analysis. *The Journal of Finance*, 54(5): 1829-1853.
- Siggelkow, N. 2007. Persuasion with case studies. *Academy of Management Journal*, 50(1): 20-24.
- Stevenson, W. B. & Radin, R. F. 2009. Social capital and social influence on the board of directors. *Journal of Management Studies*, 46(1): 16-44.
- Tripsas, M. & Gavetti, G. 2000. Capabilities, cognition, and inertia: Evidence from digital imaging. *Strategic Management Journal*, 21(10-11): 1147-1161.
- Tuggle, C. S., Schnatterly, K., & Johnson, R. A. 2010a. Attention patterns in the boardroom: How board composition and processes affect discussion of entrepreneurial issues. *Academy of Management Journal*, 53(3): 550-571.
- Tuggle, C. S., Sirmon, D. G., Reutzell, C. R., & Bierman, L. 2010b. Commanding board of director attention: investigating how organizational performance and CEO duality affect board members' attention to monitoring. *Strategic Management Journal*, 31(9): 946-968.
- Tushman, M. L. & Anderson, P. 1986. Technological discontinuities and organizational environments. *Administrative Science Quarterly*, 31(3): 439-465.
- Venkatraman, N. & Camillus, J. C. 1984. Exploring the concept of "fit" in strategic management. *Academy of Management Review*, 9(3): 513-525.
- Walsh, J. P. & Seward, J. K. 1990. On the efficiency of internal and external corporate control mechanisms. *Academy of Management Review*, 15(3): 421-458.
- Westphal, J. D. 1999. Collaboration in the boardroom: Behavioral and performance consequences of CEO-board social ties. *Academy of Management Journal*, 42(1): 7-24.
- Westphal, J. D. & Fredrickson, J. W. 2001. Who directs strategic change? Director experience, the selection of new CEOs, and change in corporate strategy. *Strategic Management Journal*, 22(12): 1113-1137.
- Yin, R. K. 2009. *Case Study Research: Design and Methods* (Fourth Edition ed.). Thousand Oaks: Sage Publications.
- Zahra, S. A. & Pearce, J. A. 1989. Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15(2): 291-334.
- Zahra, S. A. & Pearce, J. A. 1990. Determinants of board directors' strategic involvement. *European Management Journal*, 8(2): 164-173.

FIGURES

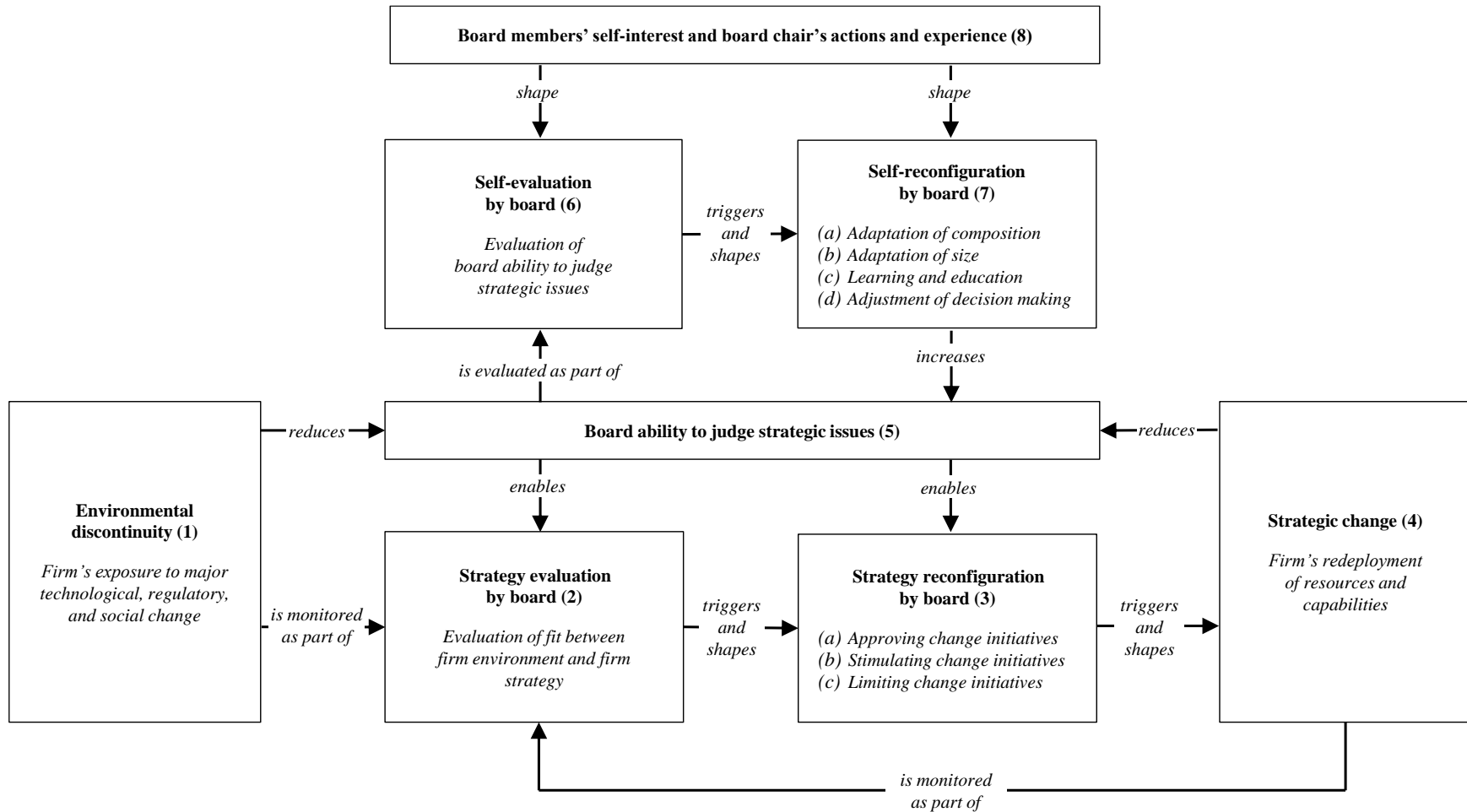


Figure 1: Theoretical framework showing internal board challenges and dynamics in times of environmental discontinuities

TABLES

Table 1: Overview of sample firms and interviewees

| Firm | HighCorp | | | | | LowCorp | | | | |
|--|---|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---|--|----------------------------------|----------------------------------|
| | 1 | 2 | 3 | 4 | 5 | 1 | 2 | 3 | 4 | 5 |
| Exposure to environmental discontinuity | High | High | High | High | High | Low | Low | Low | Low | Low |
| Revenues* (in M USD) | >1,000 | >1,000 | >500 | >500 | >1,000 | >100 | >100 | >100 | >500 | >100 |
| Total number of board members* | >10 | >5 | >5 | >5 | >10 | >5 | >10 | >5 | >10 | >5 |
| Total number of interviewees per firm** | 5 | 5 | 4 | 4 | 4 | 4 | 5 | 6 | 4 | 4 |
| Number of interviews with board members/thereof (vice) chair | 4/0 | 4/1 | 2/0 | 3/1 | 3/1 | 3/1 | 4/1 | 3/1 | 2/1 | 3/2 |
| Number of interviews with members of TMT/thereof CEO | 1/1 | 1/1 | 2/1 | 1/1 | 1/1 | 1/1 | 1/1 | 2/1 | 2/1 | 1/1 |
| Interviewee codes** | H1-B1 H1-B2 H1-B3 H1-B4 H1-M1 | H2-B1 H2-B2 H2-B3 H2-B4 H2-M1 | H3-B1 H3-B2 H3-M1 H3-M2 | H4-B1 H4-B2 H4-B3 H4-M1 | H5-B1 H5-B2 H5-B3 H5-M1 | L1-B1 L1-B2 L1-B3 H1-B4 | L2-B1 L2-B2 L2-B3 H1-B2 H1-B3 | L3-B1 L3-B2 L3-B3 L3-M1 L3-M2 L3-G1 | L4-B1 L4-B2 L4-M1 L4-M2 | L5-B1 L5-B2 L5-B3 L3-B3 |

* End of year 2015; no exact numbers given to maintain anonymity of firms

** The interviewee codes take the form of “FX-IY”, where F denotes the firm’s exposure to the environmental discontinuity (“H” for high, “L” for low”), X the number of the firm in the high or low exposure group (“1” to “5”), “I” the individual’s role in the firm (“B” for “board member”, “M” for “management”, or “G” for “general employee”), and “Y” a number serving to uniquely identify the individuals within the same role category of a firm. For example, the identifier “H2-B3” denotes that our data source is the third board member of the high-exposure firm HighCorp 2. Four directors have interlocks (second mandate within the sample). For example, as the CEO of LowCorp 1 is also a board member of HighCorp 1, the code H1-B4 is listed for both firms (see also LowCorp 2 and LowCorp 5).

Table 2: Board roles during governance of strategic change

| Role | Activities | Exemplary Quotes |
|---------------------------------|--|---|
| Strategy evaluation | Monitoring of environmental change | <ul style="list-style-type: none"> • “We follow the environmental situation very closely, read up about things, talk about it and also discuss this in the [strategy] committee.... What has changed in the legislation? Is there anything important, and how should we react?” (L2-B1) • “As the board we extensively dealt with the question of how we see the situation in the industry, the development of the industry. What are the key success factors, what are the scenarios in the development of energy policy and energy economics?” (H5-B2) • “We said that in any case what needs to be monitored is the game changers: major disruptions [in the environment].” (H2-B2) |
| | Review of firm strategy and strategic proposals | <ul style="list-style-type: none"> • “At the beginning of the year we have the review phase where we conduct a SWOT analysis and highlight five, a maximum of five questions, that need strategic clarification.... They are presented to the board and the board discusses whether anything needs to change.” (H4-M1) • “This year, we had a strategy workshop where we asked ourselves: ‘Where do we stand?... Where are we and what are the core tasks? What path should we take?’” (L3-M1) • “The management say: ‘We have this opportunity to buy six plants. These are the numbers, the returns, the concessions, the political risks, possible returns.’ Then the strategy fit is evaluated.” (H2-B1) |
| Strategy reconfiguration | Approving change initiatives | <ul style="list-style-type: none"> • “The board can say ‘Yes, that’s the right direction, that’s a good strategy, let’s go!’ (L2-B2) • “Practically, a lot of decisions are prepared by the management, presented to the board and then approved...” (L2-B1) • “We [the top management team] come with a strategy... Then, the board approves it.” (H4-B3) • “The impetus almost always came from the management, and then... approved.” (L3-B3) |
| | Stimulating change initiatives | <ul style="list-style-type: none"> • “The board can start the process [of change]. For example, if it says: ‘Hey, we should enter this business.’” (H3-M1) • “When I read an interesting article on energy issues... I also bring this into the board discussion: ‘I have read this, it’s an exciting topic. Couldn’t we do this? Please look at it.’” (H3-B1) • “The management needs to propose measures to deal with the situation. And if they aren’t enough, we say: ‘Gentlemen, that’s not enough. We expect a more fundamental change.’ Such things are initiated by the board.” (L2-B2) • “The situation is going to be quite dramatic in three years. We will have a problem. And if the board notices this, because it has the broader perspective and thinks in longer time horizons, it’s the board’s task to make suggestions and define tasks.” (H2-B1) • “The change in CEO, that was of course connected with the strategic change. We wanted strategic change.” (H2-B3) • “The board prepared for the change by bringing in a new CEO and letting the previous one take early retirement. This built the basis for a new start.” (H1-B2) |
| | Limiting change initiatives | <ul style="list-style-type: none"> • “It’s a sign of the board’s power that you can say ‘no’ to specific proposals. If you have to say ‘yes’ to everything, you’ve lost your independence” (L4-B2) • “And perhaps someone says: ‘No, we’re not doing three projects. Let’s start with one, then a second one, and then we’ll see.’” (L3-B1) • “Well, investment proposals are not simply rubber-stamped. Especially proposals for renewables or a power plant or something, which are often enthusiastically presented by the management; they might be stopped.” (H4-B2) • “If the management makes proposals that are of a certain significance, we [might] say: ‘Guys, we don’t want to take this any further. Forget it.’” (L2-B1) |

Table 3: Overview of strategy reconfiguration by boards

| Firm | Exposure to Environmental Discontinuity | Focus of strategy reconfiguration by board | | | | | | |
|------------|---|--|------|------|------|------|------|------|
| | | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| HighCorp 1 | High | S | S | S | S | L | L | A |
| HighCorp 2 | High | A | S | S | S | A | A | A |
| HighCorp 3 | High | L, A | L, A | L, A | L, A | L, A | L, A | L, A |
| HighCorp 4 | High | A | A | A | S | S | S | S |
| HighCorp 5 | High | L | L | L | L | L | L | S |
| LowCorp 1 | Low | L, A | L, A | L, A | L, A | L, A | L, A | L, A |
| LowCorp 2 | Low | A | A | S | L | L | L | L |
| LowCorp 3 | Low | S | L, A | L, A | L, A | L, A | L, A | L, A |
| LowCorp 4 | Low | L, A | L, A | L, A | L, A | L, A | L, A | L, A |
| LowCorp 5 | Low | A | L, A | L, A | L, A | L, A | S | S |

A: Approving change initiatives (board activities with a strong focus on approving shaded light gray)

L: Limiting change initiatives (board activities with a strong focus on limiting shaded black)

S: Stimulating change initiatives (board activities with a strong focus on stimulation shaded dark gray)

Table 4: Need for reestablishing board abilities in times of environmental and strategic change

| | | Exemplary quotes |
|--|---|--|
| Firms with low exposure to environmental discontinuity | Environmental change leads to challenges for board | <ul style="list-style-type: none"> • “In the energy sector, the situation is highly charged since these extreme [environmental] changes, which have emerged in the previous years, are new for the people [on boards].... They previously lived in a closed world.” (L2-B2) • “The topic of unbundling, grid regulation—that’s a topic that even for the management requires a different approach. And then there’s the [market] liberalization, so you can’t just supply energy but have to deal with customers.... Strategically, those are completely new challenges, and I think there are not that many people in Switzerland who are actually able to deal with them strategically.” (L3-B3) • “The level of expertise in the board...well, not that the old board didn’t have any expertise, but today much more know-how is required.” (L1-B2) |
| | Need for reestablishing board abilities in times of environmental change | <ul style="list-style-type: none"> • “The expectation that the management continuously improves—that actually needs to be the same for the board of directors.... If we want to tackle the challenges in the energy sector in a positive way, there needs to be change in the board of directors. That’s a huge problem in the energy industry.” (L2-B2) • “And it’s not easy to take on the responsibility in this fast-changing time. It takes quite some time to acquaint oneself with these complicated things.” (L4-M2) |
| Firms with high exposure to environmental discontinuity | Environmental change leads to challenges for board | <ul style="list-style-type: none"> • “The prices are below the cost for electricity... And there are scenarios where they fall further or remain the same.... How should we react? We develop scenarios showing what the price curve will look like. And that’s a highly complex task.... And how do we react in each scenario? It’s become much more challenging for the board.” (H1-B4) • “Before the energy transition there were practically no controversial and heated discussions. Now, we have them.... You notice, it’s quite challenging for the board.” (H3-B1) • “It’s extremely difficult. I mean, the situation today is characterized by a failure of the fundamental market mechanisms.... It’s extremely difficult, not just for the board members, to define a way forward.” (H5-B1) |
| | Strategic change leads to challenges for board | <ul style="list-style-type: none"> • “If a company moves in a completely different direction, the board finds it hard to keep up.” (H2-B4) • “Strategy implementation, analysis, adjustment, analysis, we’re constantly out of our comfort zone. You know nothing about what you have to deal with. You don’t know what’s coming.” (H2-B1) • “But when you install a new management, a new CEO, only when they start operating do you realize how challenging this [new direction] really is.... It is extremely challenging for the board with all these new projects, with the new drive forward.” (H1-B4) • “Business has reached such an incredible level of complexity that I have the feeling that [the board] can no longer follow it.... And that’s why, as I perceive it, the board resorts to the role of selection.” (H3-M2) • “The board members, who only do this job sporadically, they need to judge strategies with enormous investment volumes where they actually lack the knowledge. And I believe, to be honest, there’s a clear limit to their ability to control this—due to the complexity and the speed.” (H4-M1) |
| | Need for reestablishing board abilities in times of environmental and strategic change | <ul style="list-style-type: none"> • “We’re going through a 180 degree turn and for this, we need different competences in the board.... I have a good chair and some of the board members definitely should stay. But others need to be replaced and the size of the body needs to be reduced. You can’t discuss anything with 12 people.” (H1-M1) • “There’s two worlds: before the energy transition and after the energy transition. Before the energy transition, people said, ‘Why do we need training?’ After the energy transition..., now, it’s getting exciting.... It may very well be the case that this triggers processes at the level of the board in the sense of, ‘Oops, we’re all in the same boat. This could get dangerous, we need to pay attention.’” (H3-B1) |

Table 5: Board self-evaluation and self-reconfiguration

| | Exemplary practices and tools | Exemplary quotes |
|-----------------------------|--|---|
| Self-evaluation | <ul style="list-style-type: none"> • Feedback rounds • (Self-)assessment forms and meetings • Self-initiated external assessment by owners or consultants | <ul style="list-style-type: none"> • “Even in the case of well-functioning boards, if there are no changes on the horizon, there should be a self-review every two or three years. Do we have the right board composition? Are we in need of additional competencies?” (L3-B2) • “The only systematic measure to ensure this [that the board lives up its challenges] is the assessment of the board. There are two forms of this assessment: self-assessment and external assessment. To give you an example, with HighCorp 4, I have done two self-assessments and one externally conducted assessment. And a very important input for this assessment is the competency profile.” (H4-B1) • “From the start, he [the new chair] was very keen on discussing board-internal processes and how we work together, and he did so. We had a dedicated event where we spoke about board-internal processes.” (H1-M1) • “It can take 15 minutes, but a platform where everyone is invited to express their thoughts on the joint work is absolutely necessary.” (L5-B2) |
| Self-reconfiguration | Adaptation of composition | <ul style="list-style-type: none"> • Replacing board members • Use of competency profiles <ul style="list-style-type: none"> • “If the company, as I said earlier, is moving its focus to a different direction, the focus of the board needs to change, too—through its composition too.” (H2-B4) • “And what you consider when someone leaves is: How do we want to position ourselves? Which competences do we need in the board in the future? I think this is clear.” (L3-B2) • “Before each new appointment, we reflect on the profile required. We have documents that list the profiles we are looking for.” (H1-M1) • “That [change] resulted in more people from industry joining the board who had already dealt with similar topics before and brought a new way of seeing.” (H5-B1) |
| | Adaptation of size | <ul style="list-style-type: none"> • Size reduction goals and measures <ul style="list-style-type: none"> • “I am a big fan of small groups. To me, depending on the firm size, a board of five to seven is ideal. Most of the companies in this sector still have boards that are too large. The larger the board, the smaller the efficiency. You need... to keep the team small, then you can get things moving.” (L1-B2) • “Looking into the future, it will be important that we have a board of a size that allows you to have discussions, which can prepare and approve decisions.” (H1-B3) • “You want the board to be a working group. But it also shouldn’t be too small.... Otherwise, the individual board member has too much power. So, you need a handful of people, maybe seven or eight, that’s good.” (H2-M1) • “We want to make the board more effective, that’s why we decided to reduce the size of the board by a further two members.” (H2-B4) • “The board size was reduced from 23 to 11, and then to seven.... We completed this change process in the last three to four years. [...] In the old world, many boards were too big. That poses problems for completing tasks efficiently in the board.” (L2-B2) |

| | | |
|--------------------------------------|---|--|
| Learning and education | <ul style="list-style-type: none"> • Individual learning (e.g., reading, courses, knowledge exchange, conferences) • Board-internal training sessions and workshops • On-site visits • Training concepts and guidelines | <ul style="list-style-type: none"> • “How can you ensure that the competencies are being developed further?... I have just written a board member learning concept and have given it to three colleagues for feedback. In essence, what I put down was as follows. First, I assume that everyone is responsible for their own competencies. Nobody’s going to spoon-feed you. Second, I assume that everyone is further developing their general board competencies.... We would be willing to partially finance this.... And third, that addresses the firm-specific competencies.... There I want to develop an agenda together with the CEO.” (H4-B1) • “Competency plays an important role.... And this requires a continuous effort to keep oneself up to speed with the topic.... What do you do to really stay up to date, to understand the dynamics of this area and this industry? I do think that with education and training one can cover some issues—and with personal contacts.... In today’s times, it is extremely important to address certain questions very systematically.” (L1-B2) • “I find it [continuous education for board members] very important. First, I went to a conference. I had asked the CEO which conference they [the executives] should visit, and whether it was something I could benefit from. And then I went to that conference, it was in Düsseldorf I believe, an energy conference, and it was really interesting.” (H1-M1) • “What does the world look like? What’s out there? And what have others done already? I invite experts who can educate the board and perhaps the management on a certain issue.” (H5-B1) • “It’s quite challenging now for the board. We did a lot of training, hired an external consultant who showed the board how to steer something like this and take responsibility for it.” (L4-M2) • “This year, we developed a training concept in the board that sets out the topics we want to educate ourselves in. Each year, we do a sort of training series where we take a look at something and try to shine a spotlight on a specific area of business; something that’s important that year.” (H4-B2) • “It’s not only on-site visits. You know, nowadays there’s specific training that is offered for directors.... It’s not only about expert knowledge, but also about the responsibilities of the board.” (H5-B2) |
| Adjustment of decision making | <ul style="list-style-type: none"> • Task separation and specialization (e.g., through committees) • Standardized processes (e.g., multi-stage) • Adjustment of voting procedures • Adjustment of meeting frequency | <ul style="list-style-type: none"> • “The meeting protocols had 25 pages. So, we finally said, we cannot lead the company like this..., we need to organize the board meetings differently.... We formed a strategy committee and we developed the entire strategy together with the committee.” (H1-M1) • “We made adjustments [to the process of taking decisions]—that is, we’ve now switched into taskforce mode, including a weekly conference call.” (H5-M1) • “The large board was too slow. That’s why we founded a strategy committee.” (L2-B2) • “Due to a different budget limit above which things had to be approved in the board, back then the board had to deal with a lot more individual proposals.... Now, the board really restricts itself to checking the strategy implementation and approving investments above CHF800M.” (H2-M1) • “How can the board assume responsibility? And it has to be able to assume it, and the expectation is to filter two to five priorities from all the potential issues and then say, ‘This is what we’ll deal with.’ Or, to turn that around: ‘We will not deal with everything else.’” (H4-B1) • “I can’t remember any decision [before the environmental changes] that wasn’t taken unanimously. That’s different today. We are more democratic today.” (H2-B4) • “A board meeting can have 10 to 15 agenda points. You can’t discuss issues sufficiently, especially if it is important topics like alliances. And therefore we have extraordinary meetings where we try to address these issues.” (L4-M2) |

Table 6: Board members' self-interest and board chairs' actions and experience as antecedents of self-evaluation and self-reconfiguration

| Exemplary quotes | |
|---|--|
| Board members' self-interest | <ul style="list-style-type: none"> • “Self-evaluation would have to be designed so the results weren't made public. So board members didn't have to admit to their shortcomings. Otherwise, I believe, it might be seen as criticism, so board members had to defend themselves. That wouldn't be good.... Board members don't like to question themselves.” (H3-B1) • “If, in addition to the prestige, I have a nice compensation package, I think that this can easily lead to a situation where it's not so easy to force a board member out. That's a difficult process. Because, generally, board members won't say, 'I'll go voluntarily.'” (H3-B1) • “You know, we have some old fossils on the board who don't want to leave. I mean, I don't want to leave either! [laughs]” (L4-B1) • “Learning and education depends on how much time I am willing to allocate to my [board] mandate, how much it interests me—my personal motivation.” (H4-B2) • “Traditionally, being on the board of electric utilities was a lifetime mandate. That's changed during the energy transition.... However, there are still many that don't see the necessity. They join a board and would like to stay.” (H3-B1) • “It's also a matter of how much time do I spend on my mandate, how much does it interest me. And if I am really interested in the topic, I believe that I will be willing to spend the time and go the extra mile and say, 'Okay, there's no direct reward, but I'll do it anyway, because I want to.'” (H4-B2) • “I believe that for many board members the question arises of how much time can I really allocate to an individual mandate and how deeply can I get immersed with the business. Do I have the time?... And one problem is that often board members see their mandate as a bit of a retirement hobby.” (H4-B2) |
| Board chair actions and experience | <ul style="list-style-type: none"> • “Who controls the board? That requires a brilliant board chair.” (H2-B4) • “I hope I could give you an insight into how the board needs to change [in times of environmental discontinuity], so it is a team and can support the management. The board chair drives this process.” (H2-B4) • “The change process [of the board] is formally tied to the role of the board chair.” (H2-B4) • “Board chairs need to make sure that there's good corporate governance. And if there isn't, they need to make sure that they initiate the right processes to correct the mistakes. In the boards that I am active in, it is the chair who triggers this.” (H4-B1) • “We don't do self-evaluations. I think I'll have to talk to [the board chair] about this. It would be for them to initiate this.” (L2-B1) • “The board chairs needs to ask themselves, 'Do I have the right competences [on the board]? What's missing? And do all members on the board function? Do they fulfill their minimum duties; are they prepared? Are they involved, do they give inputs? Are they relevant? Are they constructive? Are they stubborn?' And so on...” (H4-B1) • “I see it as my role as board chair to make sure that the team is always optimally equipped to deal with the challenges of the firm. And that means that I need to actively approach board members when I think they're not working well, or if I think that there are redundant competencies or gaps that we need to fill. Or if the board is too big and needs to be reduced in size. Those are difficult discussions, but that's normal. Everyone who knows how to lead knows how to do this.” (H4-B1) • “Due to the chair's background, he is in a better position to initiate changes [in the board]” (L4-B1). • “So [the board chair] took over the position as the chair and noticed that we needed specific committees and then we implemented them in the board.” (L2-B1) • “I believe that it's not easy to find good board chairs, because, as I tried to tell you before, the chair needs to fulfill many criteria. They need to have the necessary intelligence, the necessary expertise, etc.” (H2-B4) • “Our board chair is an exceptional talent and I believe that's decisive for whether [the board] works or not. If the chair is good, that will rub off on the board. If they're not, the board will become lazy and difficult to lead.” (H4-M1) • “The board is really good. I think this is because the board chair has a lot of experience.” (H4-B3) |

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