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Citation: Bryce, C., Ashby, S. & Ring, P. (2024). Reconciling Risk as Threat and Opportunity: The Social Construction of Risk in Boardrooms. Risk Analysis, doi: 10.1111/risa.14275

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DOI: 10.1111/risa.14275

ORIGINAL ARTICLE

Reconciling risk as threat and opportunity: The social construction of risk in boardrooms

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Funding information
Association of Chartered Certified Accountants (ACCA)

The authors wish it to be known that, in their opinion, all authors should be regarded as joint first authors. The order of authors provided in this article was determined by measuring the distance from the grave of the founding father of one of the most important theorems within the risk analysis field (Reverend Thomas Bayes—Bunhill Fields, London), to that of each of the coauthors as would be travelled by bicycle on the day in which final author order was discussed. The results were as follows: Cormac Bryce (750 m), Simon Ashby (411 km), Patrick Ring (770 km). Cofirst authors can prioritize their names when adding this article to their academic CV.

Abstract

Board directing is a continuous process of risk analysis and control in response to the duality of risk as threat and opportunity. Judgments are made and remade to simultaneously reduce the potential for damaging threats (e.g., fraud, reputation damage), while exploiting opportunities (e.g., new product development, mergers and acquisitions). Adopting an institutional logics approach, we explore this process of risk analysis and control through the varied subject identities (e.g., directorial roles), risk management practices (the procedures and tools used to identify, assess, and control risk), and risk objects (the product of risk identification, assessment, and control, e.g., a risk matrix or register) of boards. We argue that the contingent interaction between these identities, practices, and objects inform the "risk logic" of a board, which may draw attention to the notion of risk as threat, risk as opportunity, or both threat and opportunity. Using the testimony of 30 executive and nonexecutive directors that represent 62 companies from a range of public, private, and third-sector organizations, we contribute to the literature on the microfoundations of risk analysis in organizations by shining a light on how board directors understand, assess, control, and ultimately govern risk in organizations.

KEYWORDS
board directing, duality of risk, governance, risk management

1 | INTRODUCTION

> "Organizations need to be more adaptive to change. They need to think strategically about how to manage the increasing volatility, complexity, and ambiguity of the world, particularly at the senior levels in the organization and in the boardroom where the stakes are highest."
> (COSO, 2017)

Research into the analysis and control of risk in organizations that solely focuses on the threat dimension of risk (Bednarek et al., 2021) is at odds with contemporary notions of corporate risk management practice. The central tenet of "Enterprise Risk Management" (ERM), the dominant framework for managing corporate risk, is that risk taking is a strategic decision which can result in a variety of gains (opportunities) and losses (threats) for organizations (Aven & Aven, 2015; COSO, 2017; Hayne & Free, 2014; ISO, 2018; Purdy, 2010). This strategic approach to corporate risk management has evolved through regular updates of industry standards, including the International Organization for Standardization

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(ISO) 31000 risk management standards and the Committee of Sponsoring Organizations of the Treadway Commission[1] (COSO) ERM framework.

The importance of strategic risk analysis through frameworks like ERM has grown in the face of pressure, from a variety of stakeholders, to manage the opportunity and threat dimensions of risk appropriately (Björnsdóttir et al., 2022). The World Economic Forum Global Risk Report (2022, 2023) highlights the centrality to corporations of significant global risks, such as rapid digitalization leading to new cyber vulnerabilities (Welburn & Strong, 2022), operational resilience in the presence of infectious disease (Bryce et al., 2020), and the ongoing climate transition (Sovacool et al., 2023).

This paper explores the relationship between risk analysis and the duality of risk as opportunity and threat. Past research has situated the discipline of risk analysis within the varied practices and objects that comprise the management and governance of risk (Aven & Flage, 2020; Aven & Zio, 2014; Ring et al., 2016; SRA, 2017). "Practices" refers to the procedures and methods used to support the performance of risk management; while "objects" are understood as the products of these procedures and methods, such as a risk matrix or risk register (Cárdenas et al., 2014; Proto et al., 2023). Our paper contributes to the literature by exploring how these practices and objects influence the nature and outcomes of risk analysis in organizations. We argue that the specific combination of these practices and objects, along with the subject identities of those adopting and employing these practices and objects, can influence whether risks are analyzed in a more or less formal way, as well as whether the focus is more on the threat or opportunity dimension of risk.

To explore these issues, we use the context of board directing. Board directing (Pye, 2002a, 2002b), is a form of "decision-maker review and judgment" (Aven, 2023; Aven & Thekdi, 2021) that requires a delicate appraisal of opportunities and threats. Parker (2008) notes that 1-minute board directors are focusing on assessing and mitigating internal control-oriented threats, the next on the exploitation of value creating opportunities, and often both. This requires frequent risk analysis and decision-maker review and judgment in conditions of uncertainty. To support their analysis and decision-making, board directors use a variety of risk management practices and objects, while simultaneously having to reconcile their obligations to maintain the organization as a going concern, protect vulnerable stakeholders from financial or physical loss, and generate value either in terms of profit or in terms of some form of social return. As a result, our research provides some insight into the extent to which boards adopt the (pre/anti) cautionary principles as outlined by Aven (2019), Aven, 2011a, 2011b, Aven and Renn (2018), Aven and Renn (2012)), and Lofstedt (2003).

[1] ISO is a worldwide federation of national standards bodies (ISO member bodies). COSO is a private sector initiative, jointly sponsored and funded by: American Accounting Association; American Institute of Certified Public Accountants; Financial Executives International; Institute of Management Accountants; and The Institute of Internal Auditors.

In addition to exploring risk analysis in the context of board directing, our paper draws upon ERM-oriented research concerning the duality of risk (e.g., Bednarek et al., 2021; Hardy & Maguire, 2016; Maguire & Hardy, 2013; Palermo et al., 2017). That research has explored the duality of risk using an institutional logics perspective; specifically, the logics of precaution and opportunity (Bednarek et al., 2021; Palermo et al., 2017). These "logics" can be discerned by examining a range of factors at board level, including the backgrounds (skills, experience, etc.) of board directors and organizational/board level processes and practices (Brown et al., 2009; MacKay & Sweeting, 2000; McNulty et al., 2013; Zhivitskaya & Power, 2016).

This paper contributes to the risk analysis literature in two ways. First, we explore the experience and interaction of board directors in the boardroom, something that academics find hard to access (Bezemer et al., 2014). Though there is research on the roles of board directors and the practice of board directing (e.g., Bailey & Peck, 2013; Barroso-Castro et al., 2017; Bezemer et al, 2014; Brennan et al., 2016; Machold & Farquhar, 2013; McNulty et al., 2013; Minichilli et al., 2012; Parker, 2008; Roberts et al., 2005; Stiles, 2001; Useem & Zelleke, 2006), there is little which relates this to the performance of risk analysis in the boardroom. Second, we provide a framework for understanding how the "logic" of risk analysis and related decision-maker review and judgment is developed and exercised in the domain of the boardroom, through an exploration of how boards navigate the strategic level risk challenges they face. In doing so, we address a need identified by McPherson and Sauder (2013, p. 166) "to unpack how local actors mediate institutional demands and the requirements of day-to-day organizational activity."

We find that board practices, contrasting identity roles, and variations in board expertise and resources influence the performance of risk analysis in the boardroom. Furthermore, in line with previous research on the duality of risk, we find, that this performance can be situated along a continuum, with what we describe as a "prescriptive approach" to risk analysis at one end and a "principled approach" at the other. The former represents a more formalized, prescriptive approach to risk analysis and control, emphasizing the importance of clearly documented processes and procedures. The latter represents a less rigid and more malleable approach to exploiting opportunities and mitigating threats. A more prescriptive approach is rooted in a focus on threat reduction, while a more principled approach emphasizes the exploitation of opportunities. We consider this to be a dynamic continuum, insofar as boards, and board decisions, are not "static" in the approach adopted in analyzing risks. Variability in the extent to which board decisions may be characterized as more or less principled or prescriptive is found to be a result of variability in the objects, practices, and subject identities deployed within the boardroom in relation to each decision.

Section 2 explores past research on the duality of risk, and following the work of Friedland et al. (2014), its relevance to

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the subject identities, practices, and objects that are employed in the boardroom. In Sections 3 and 4, we outline our research method and findings. Section 5 concludes with a discussion of how our findings contribute to the existing literature on the duality of risk as well as risk analysis in the boardroom and provides some suggestions for future research.

2 | LITERATURE REVIEW: THE TENSIONS INHERENT IN THE DUALITY OF RISK AND BOARD RISK ANALYSIS

An institutional logics perspective, specifically, the relationship between the local settings in which decisions are made and the "logics" that decision-makers operating in those settings enlist (Haveman & Rao, 1997; Thornton, 2002), has been used in other research to explore how organizational actors (managers, employees, directors, etc.) understand risk and make risk management decisions (Arena et al., 2010; Palermo et al., 2017). It provides a framework for understanding individual and organizational behavior within its social context (Thornton & Ocasio, 2008; Thornton et al., 2012) and the practices and outcomes that result (Friedland, 2012). We examine risk decision-making in the social context of the boardroom by examining the behaviors and practices of board directors.

An institutional logic "is an order of production composed of distinctive subjects and objects mediated by a regime of material practice .... That is, orders of practice that depend on the identities of subjects and ontologies of objects, which in turn depend on these same orders of practice" (Friedland et al., 2014, p. 334). That logic is not founded upon isolable intention or rationality, but "through a metaphysical category—an institutional substance ..[that is].. not values per se, but rather … Ontological enactments, a what done through a how… Non-observable reasons that can only be phenomenalized through practice" (Friedland et al., 2014, pp. 334–335). These practices, and the objects immanent to them, are the visible artifacts of the institutional substance, the logic, employed by subjects who both invest in those objects and practices and, through that employment, manifest the logic of their decision-making. The institutional logics perspective thereby recognizes "the substantializing practices of its practitioners" (Friedland et al., 2014, p. 336) which both produce and embody logics.

Therefore, in the context of this study, to discern the "logics" of board risk analysis it is necessary to examine their production through that board's risk management practices, the objects of risk management employed in those practices, and the "subjecthood" of the board members involved in those practices; all of which are considered important components of a well-developed and embedded ERM framework (Aven & Thekdi, 2019; COSO, 2017; Purdy, 2010). In the present context, "subjecthood" refers to social identity, background, experience, and perceptions of the decision-makers in the boardroom. Meaningful "practices" are the "relatively coherent and established" (Thornton et al., 2012, p. 128) ways in which board members organize themselves to fulfill their collective responsibilities for risk management. Outside the context of risk analysis, there is extensive literature on how board directors understand the role implications of their board identity, and how this influences their behavior. Common themes in this research include the collaboration needed, and control tensions inherent, in a board during decision-maker review and judgment (Kerr & Werther, 2008: Roberts et al., 2005, Pugliese et al., 2009; Zhivitskaya & Power, 2016), and the practices of boards in coordinating their activities and making decisions (Bailey & Peck, 2013; Barroso-Castro et al., 2017; Bezemer et al., 2014; Brennan et al., 2016; McNulty et al., 2013; Minichilli et al., 2012; Parker, 2008).

Board "objects" are the artifacts integral to these socially meaningful risk management practices (Hall et al., 2015; Power, 2016). Previous work by Mio et al. (2022) on risk appetite statements, Abraham and Cox (2007) on annual reports, and Beasley et al. (2021) on SEC proxy disclosures are all examples of secondary risk analysis research being conducted on board "objects." Importantly, while field level research into the institutional logics of risk management is sparse, at an organizational level it has identified competing logics of opportunity and risk taking versus precaution and risk control (Palermo et al., 2017). Research by Bednarek et al. (2021) also explores the connections between risk as a source of threat or opportunity and the formation of risk management strategies in (insurance) organizations. Neither examines this duality in the context of logics of decision-making within the boardroom.

In what follows, therefore, we seek to establish the relevance of the duality of risk to board decision-making, and to understand how boards' reconciling of that duality can be understood in terms of the institutional logics of boardrooms. This approach is supported by the work of Friedland and Alford (1991), who originally conceived the institutional logics perspective at a societal level, looking at the influence of institutional orders like bureaucracy, market forces, democracy, and religion on individuals and organizations. To this end, we examine the subject identities, practices, and objects deployed in boardrooms to understand the nature of the risk logics of board decision-making and the influence the consequences of those decisions have for our understanding of the duality of risk. We therefore proceed with the following research question: *Is the duality of risk as opportunity and threat recognized by boards, and how do the subject identities, practices, and objects employed in board risk-decision-making give substance, and meaning, to that duality?*

In answering this question, we draw attention to the interaction between the composition of boards and the risk practices and techniques they employ. It is through an examination of this interaction that the logics of board risk decision-making can be understood. In addition, we add weight to the literature, which explores how the duality of risk influences risk analysis in organizations, and to how the logics of board risk decision-making both sustain, and are supported, by this duality. In times of increasing uncertainty

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and complexity, it is important for boards, in analyzing risk, to understand, and be reflective, about the nature of their decisions, and how these are influenced by the interaction of the board's composition, risk management practices, and the objects of risk management it employs. This is also important for other stakeholders in an organization, insofar as they are concerned about appropriate risk governance.

3 | METHODOLOGY

3.1 | Research design

The theoretical position adopted in relation to our research question acknowledges the significance of the way institutional objects and practices are intimately entwined with, and valorized by and through, the attitudes and behaviors of institutional subjects. It requires an examination of how specific objects are woven into certain practices that are themselves understood by and through particular forms of subjectivity. Sample selection was purposive (Tuggle et al., 2010) as it was restricted to senior decision-makers within boardrooms, given their experience in making decisions that help organizations select, prioritize, and achieve their objectives (Dulewicz & Herbert, 1999; Pugliese et al., 2009; Zahra & Pearce, 1989). It is these organizational actors who make strategically important judgments (Aven, 2023; Aven & Thekdi, 2021), and who will be held accountable for their decisions under the Financial Reporting Council (2018) UK Corporate Governance code, discussed below. Importantly, this enabled us to examine the subjectivities of board members, as well as the risk objects and practices identified by them as relevant to the discussion, analysis, and control of risk at board level. Ultimately, this allowed us to tentatively delineate what the triadic relationship between those subjectivities, objects, and practices suggests about how boards resolve the duality of risk.

We were also interested in securing a wide range of board experience across multiple industries. As such, we were mindful of institutional age, risk profile, ownership, and growth rates (Boyd, 1990; Dess & Beard, 1984; Eisenhardt, 1989) when considering companies to approach, given the potential of all these issues to shape boardroom behavior (Vedula et al., 2019). This enhanced the likelihood of discovering diversity in approaches to risk decision-making, which was fundamental to our research question. Previous research by Bezemer et al. (2014) has highlighted the challenges associated with gaining access to board directors for research purposes. Given that access would be critical to the success of the project, we began by considering those companies we felt we might be able to obtain access to via professional connections, or through professional bodies who have relationships with employees within those companies. It is important to note here that none of the research team had personal or professional connections with any of the actual subjects being interviewed.

We selected 50 UK-headquartered institutions to approach, of which 29 agreed to take part and 30 interviews were conducted (two in one organization), indicating a response rate of 58%. The main reason provided for failing to take part was still that of time constraints on the availability of potential subjects. Participants were either current executive or nonexecutive directors, had held such posts and were now consultants, held equivalent posts as trustees for trust-controlled organizations, or were risk directors reporting directly to the board. Table 1 provides further information on those we interviewed, anonymized to protect their identities. Many participants had multiple concurrent board-level (executive and/or nonexecutive) roles in diverse organizations (62 in total). We explicitly asked them to focus on their role in the organization we contacted to request an interview, although it is inevitable that their responses will also reflect experiences in other organizations. Our intention was not to draw comparisons between sectors, but to gather a broad "snapshot" of risk analysis across boardrooms to address our research question.

Aside from adopting standards of risk management as set out by ISO31000 (2018), or the COSO (2017) guidelines for managing risk entity-wide, there are fundamental legal requirements within the United Kingdom when it comes to board-level risk analysis and control. Most of this regulation is drawn from the legal framework that embodies the Financial Reporting Council (2018) UK Corporate Governance Code, which is consistent across industrial sectors (albeit certain sectors have specialized regulators with specific requirements, e.g., the third sector and financial services). Furthermore, the application of the UK Corporate Governance Code (2018) is much less prescriptive than similar codes in countries like the United States. The UK code is based on a philosophy of "comply or explain," which permits greater agency, and provided a useful context to examine the logics informing how boardrooms adopt standards and guidelines such as ISO31000 or use the components of frameworks such as COSO (2017) to conduct decision-maker reviews and judgments (Aven, 2023) within this legal framework. The United Kingdom's approach is enshrined in Principle "O" of the Corporate Governance Code 2018:

> The board should establish procedures to manage risk, oversee the internal control framework, and determine the nature and extent of the principal risks the company is willing to take in order to achieve its long-term strategic objectives.

To take account of this context, our interviews focused on four areas of strategic risk management: the role of the board in terms of risk management; barriers and challenges to the board achieving its risk management responsibilities; how the board is supported in exercising its risk management duties; and the benefits of board involvement in risk management. To corroborate and triangulate our data analysis from the interviews, we tested that analysis with two focus groups.

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TABLE 1 Stage 2 participant overview.

ID No.	Position	Sector(s)	Ownership structure	Size[a]
1	CEO	**Financial services**	Public	Very large
2	NED	**Legal services,** *Technology (software), Professional services (IT)*	Public	Very large
3	NED & NED Chair	Charity, **Food retail**, *Furniture*, *Property investment*	Public	Large
4	NED & NED Chair	**Distilling,** *Investment*, *Property development*	Private	Very large
5	NED and NED Chair	*IT, Property investment*, **Telecoms**	Private	Large
6	Trustee	*Charity and voluntary sector*, **Property investment and leasing**	Private	Medium
7	NED & CEO	*Insurance* x 4, **Trade association**	Private	Medium
8	NED & NED Chair	*Government advisory* x 2, **Pensions**, *Religious*	Private	Large
9	NED & NED Chair	**Food retail,** *Hospital, Sustainable development*	Public	Very large
10	FD	**Hotel**	Private	Very large
11	Consultant partner	**Consultancy** (advising boards)	Private	Medium
12	Consultant MD & NED	*Consultancy (advising boards)*, **Insurance**	Public	Large
13	Risk Director	**Property investment**	Private	Very large
14	Risk Director	**Retail**	Public	Very large
15	NED	**Clothing retail** x 2, *Food retail*	Public	Very large
16	CRO	**Insurance**	Public	Very large
17	FD	**IT outsourcing**	Private	Very large
18	FD	**Medical technology**	Private	Medium
19	NED	**Housing**	Private	Very large
20	Consultant & NED Chair	Consultancy (advising boards), Charity x 2 **Education**	Private	Very large
21	FD	**Banking**	Public	Large
22	Risk Director	**Public services**	Govt	Very large
23	CEO	**Housing**	Private	Very large
24	NED & NED Chair	**Commercial investment,** *Property, Social enterprise* x 3	Private	Large
25	CEO	**Banking**	Public	Very large
26	NED & Consultant	**Aerospace,** *Consultancy (advising boards), Transport*	Private	Large
27	CEO	**Consultancy** (governance)	Private	Medium
28	CEO	**Trade association**	Private	Medium
29	CRO	**Financial services**	Public	Very large
30	CFO	**Engineering** Manufacturing	Public	Very large

Note: "Medium" = between £1 m and £10 m; "Large" = more than £10 m. We also include an additional third category "Very large" = more than £100 m to reflect the scale of operations within our sample. Those sectors in **bold** indicate the area in which the interviewees company under investigation was situated, those in *italics* indicate other companies in which the interviewee has other external concurrent active board level roles.
[a]In line with Al-Tabbaa et al. (2022) size is determined by annual income.

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3.2 | Data collection

Following extensive research on board directing, we used semistructured interviews as our primary source of data collection (Bailey & Peck, 2013; Brennan et al., 2016; Pye, 2002a, 2002b; Roberts et al., 2005; Stiles, 2001; Useem & Zelleke, 2006). Consistent with our theoretical perspective, semistructured interviews allowed directors to explain, in their own words, how the board dealt with the areas of strategic risk management mentioned above. Through the exploration of such narratives, it was anticipated that we might discern the "substance" of risk logics employed in boardrooms (Friedland, 2012; Friedland et al., 2014). Data were collected in three stages similar to that of Almandoz (2012). Prior to each interview, Stage 1 consisted of the collection, where possible, of secondary data from the public domain, such as annual reports, earnings reports, and news reports relating to each interviewee's organization. This allowed the research team to gain an understanding of that organization before the collection of primary data (Le Grand & Cooper, 2013; Mason & Araujo, 2021). Given the inevitable time constraints on participants, this allowed us to focus on the key concerns of this research and focus less on general questions about the organization.

Stage 2 involved semistructured interviews, with each interview lasting on average 1 h and conducted by at least two members of the research team. In Stage 3 of our data collection, we conducted two focus groups to assess the robustness of our interview findings. Each group was comprised of board members, risk management experts, senior representatives of professional bodies, and senior representatives of trade associations, none of whom had been sampled in Stage 2 (16 members in total). In line with the work of Mikes (2011), this enhanced the generalizability of our findings, albeit our cross-sectional sample also assisted in this regard. Each focus group lasted for 2 h. All three researchers were present at each focus group. Every interview and focus group were recorded, anonymized, and transcribed for analysis.

3.3 | Data analysis

Reflecting the complexity of conduct and interaction in boards (Greenwood et al., 2011, 2014), we analyzed the interview data using several iterative steps (Miles & Huberman, 1994). In Step 1, following existing methods of coding variations in a phenomenon (Andriopoulos & Lewis, 2009; Bailey et al., 2012), the three members of the research team independently determined if there was evidence of a duality (risk as threat or risk as opportunity) across the behavior of boards. The terms and concepts used in the "Risk Capitalizer" (opportunity focus) and "Risk Protector" (threat focus) schema provided by Bednarek et al. (2021) were useful in this regard. The schema, in combination with an Nvivo analysis of the language used by the interviewees, allowed us to disentangle references to risk as threat and opportunity, as outlined in Table 3.

In Step 2, after identifying evidence of the duality of risk within boards, we returned to the interview data by collapsing and reordering codes, looking for explanations for the variance in approaches to strategizing risk as "threat" or "opportunity." We were interested in whether explanations for such variance might be found in the risk management practices adopted in boardrooms. This resulted in the development of the first-order categories set out in Table 3.

We then considered, in Step 3, the extent to which our first-order categories developed in Step 2 might provide evidence for the existence of the practices, identities, and objects, outlined by Friedland et al. (2014), as second-order themes derivable from our data. We took the data from which the first-order categories were derived and, as in Step 1, the three members of the research team independently determined if there was evidence for these second-order themes in the data. Our analysis resulted in confirmation of the second-order themes in Table 3. Thus, informed by Friedland et al. (2014), our analysis supported the existence of institutional "substance" or "risk logics" of boards. Reflecting on how these logics found expression in board judgments concerning the duality of risk identified in Stage 1, the "risk logics" of boards were identified as being on a continuum as set out in Table 4. In other words, the interplay of the subject identities, risk practices, and risk objects employed by boards help explain the different approaches taken to managing the tensions inherent in their internal control and strategizing roles.

In Step 4, we presented the findings to the two focus groups mentioned above. The data from each focus group were analyzed by all members of the research team independently, to seek confirmation of the existence of the first- and second-order concepts, as well as their implications for board "risk logics." In line with Hettich and Kreutzer (2021), this provided support for our initial findings and allowed us to develop and refine our analysis. In Section 4, where appropriate, we also include quotes from the focus groups that help to confirm the findings from the interview analysis.

4 | FINDINGS

Here we describe the results of the analysis of the interviews with our sample of board directors. We first discuss our findings concerning evidence of the threat and opportunity dimensions of risk in the discussions and behavior of boards. We then present the evidence found about the nature of the risk-related practices, objects, and director behavior in the boardroom. Finally, we use this evidence to explore the "constellations of practices, identities, and objects" (Friedland, 2012, p. 558) that influence the "risk logics" of board decision-makers' deliberations and judgments. Specifically, we posit a continuum along which the "logics" of board risk analysis and control may be situated within the context of strategic risk management (ERM) in organizations as exemplified by standards such as ISO31000 and COSO.

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TABLE 2 Risk as threat and opportunity.

Risk as threat	Risk as opportunity
"The role of our board is really to have oversight over risk management, and to ensure that our business is compliant in terms of not only managing risk, but also compliant in terms of our statutory reporting." (ID 14)	"*In some areas there should be a willingness to proactively take risk and indeed that to take no risk is potentially the biggest risk of all because there's a possibility that people innovate around you, you're left standing, and as time goes by you become the dinosaur in comparison to the rest of the sector*." (ID 23)
"I think strategy is decided at some point… And once you've agreed that, then you say right, okay, for us to get there, that is not going to be easy, and yes, there are risks associated with that, and that each of those risks, here is the impact, and here is where the impact is going to be. And then it's a question of 'how do you manage it?'"(ID 14)	*"What really could unseat the strategic objectives of the business? What really are those opportunities that the business might be missing because it's too conservative in its risk appetite. And then real discussions are not so much risks, but they are issues that affect the risk and the environment in which the organization is trading. And it's absolutely vital that the board has the opportunity and the education to allow them to have those kinds of discussions." (ID 7)*
"We very often think about the role of the board being fundamentally about the assurance in terms of safety of the overall organization—reputation, cost of return on capital, all of those issues; and the executive is responsible for the 'ensurance' of the way in which assets are deployed in the organization, and how you have as a board a sensible, meaningful conversation about that interrelationship seems to me to be absolutely critical—it's a critical space." (ID 27)	*"…it's very easy to say, 'yes, we're doing this…' but we don't need to consider risk because it is just a strategic direction, and we know there will be risk in that. Actually, you do need to take that step back of formally considering the risk in order to get the benefits of the risk management in there."(ID 13)*
"…in a nutshell, I'd typify it as oversight. There will be certain risks that they would set tolerances for at the Board level, which would be appropriate, and then they would probably spend more time looking at those risks which threaten reputation or strategy." (ID 1)	*"I would in an ideal world, put on the risk register not only all these are things that can go wrong, but what about the things that could go right that you haven't identified because you're so averse, or averse to that particular risk."(ID 25)*
"…there is a danger that by trying to do good the board could quite easily do harm to the organization itself. So, that fundamental understanding of risk versus reward is at the very heart and core."(ID 23)	*"I've been in board meetings where non-execs have challenged the executive to say well I think you're being far too cautious on this. There's a fantastic opportunity here and you need to be grabbing it with both hands while managing this risk at the same time." (ID 11)*

4.1 | The duality of risk as opportunity and threat

All the interviewees recognized the importance of risk in board level discussions, some describing risk analysis as central to the work of the board. This supports the contention that board directing involves strategically important risk management decision-making, review, and judgment (Aven, 2023; Aven & Thekdi, 2021):

> "…a lot of the time it's the dominant part of the decision-making process. I mean, should we open a new office in a certain location? That's a discussion that's pretty much entirely about risk – it's about the downside of financial risks of investing in a way that doesn't generate appropriate payback balanced with the promoting of financial perspective versus balanced against the risks of not investing and missing out on the other side that would otherwise have been captured had that facility been put in place." (ID 2)

Table 2 provides detailed support for the way interviewees discussed risk in terms of threat and opportunity, in line with previous research (Aven & Aven, 2015; Hayne & Free, 2014; Purdy, 2010). Interestingly, the above quote, and Table 2 more generally, highlights the competing nomenclature of risk analysis within the boardroom, whereby the cautionary principle, precautionary principle, anti-cautionary and/or performance management may variously be used as "*guiding perspectives*" to justify decision-maker review and judgment in the environment of the boardroom (Aven, 2019; Thekdi & Aven, 2019, Aven & Thekdi, 2021). For example, those emphasizing risk as threat focused on three main themes: the oversight of threat mitigation activities (often seen as the main role of nonexecutives); a linear approach to strategy and risk, that is, only once the strategy was determined were potential risk exposures considered; and a focus on regulatory compliance and reputation protection.

By contrast, those interviewees who emphasized risk as opportunity expressed concern over excessive precaution leading to valuable opportunities being missed. They did not demarcate between strategy setting and risk, or segregate as strongly the roles of executives and nonexecutives compared to those boards that more explicitly regarded the role of nonexecutives as overseeing threat mitigation.

4.2 | Identities, practices, and objects

In this section, we consider our findings relating to the first-order categories and second-order themes discussed in the methodology. These findings, along with representative

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evidence, are set out in Table 3. We discuss each of the first-order categories under the second-order theme with which we associate it. Thereafter, we turn to consider the interrelationship between the second-order themes.

4.2.1 | Subject identity

Executives and nonexecutives

Interviewees referred to their role as either an executive or nonexecutive director. Most often, a distinction was made between the role of executives in developing and implementing the strategy of an organization and achieving agreed performance targets, and nonexecutives in scrutinizing this work and holding the executive to account for their decisions. Understanding and managing the roles and relationships between executives and nonexecutives was a key issue. Phrases like "*creative tension*," "*critical friend*," and "*sounding board*" were used to describe a sometimes challenging, but often collaborative, relationship that many boards strove to achieve when considering strategic risks. Where respondents felt this relationship worked well, they talked about nonexecutives providing *"constructive input"* (ID 2) and *"acting as both the brake and accelerator"* (ID 5) of the business. These findings support previous work in board directing by Kerr and Werther (2008, p. 15) who state "*On the one hand, [the board] must act as a trusted advisor to top management. On the other, it must be a vigilant monitor, even an adversary of management on occasion.*" Similarly, Pye (2002a, p. 154) identifies the role complementarities and value tensions inherent in decision management and control as the "warp and weft" of the organizational fabric, "weaving together" two potentially conflicting roles. Zhivitskaya and Power (2016) also highlight how nonexecutives mix challenge along with support and involvement in risk analysis and control decisions, which they show to be a delicate balancing act involving a range of collaboration- and control-related risk management practices and objects (e.g., open discussions, formal risk reports, and internal audit reports).

However, we discovered situations where nonexecutives became involved in making executive decisions, creating "*a fuzziness around the relationship*" (ID 27). Notably, it was observed "*if the non-execs have to lead it there's going to be a problem"* (ID 23), suggesting that there is the potential for a range of understanding of boardroom responsibilities related to risk governance and mandated authorities, an issue discussed by Cucinelli et al. (2023), and Lauta et al. (2018) albeit in different contexts.

4.2.2 | Practices

Table 3 describes significant boardroom practices identified by interviewees when discussing the risk analysis and control activities of boards. Underpinning many of these practices was the need for effective communication between various organizational actors, both to confirm the validity of risk information provided and to gain assurance about the effectiveness of organizational risk processes and procedures. This finding supports the validity of the earlier work on deficits in "Risk Governance" by IRGC (2009, 2017), both in "assessing and understanding risks," but also "managing risks" (Aven, 2011a). For instance, the phrase "kicking the tires" was used by several interviewees in the context of seeking to confirm and understand sometimes disputed, and potentially biased, knowledge and information provided to them for decision-maker review and judgment (Aven, 2011b; IRGC, 2009, 2017). They explained the importance of this exposure to business operations, especially for nonexecutives, in building relationships with organizational actors. These relationships helped nonexecutives understand the inner workings of the organization and were often regarded as a means of checking the validity of, or "balancing," the information/perspectives supplied by the executive, especially where there was a domineering CEO. Other interviewees explained these practices of experiencing at first hand the operations of businesses were also about building personal relationships and trust, reinforcing transparent and open communication, ultimately improving the cohesion of the organization to act on risk as it arises (IRGC, 2009, 2017):

> "openness and transparency is absolutely key to successfully managing risks. No one should fear raising a risk… openness and transparency and not shooting the messenger are one of the great success factors in managing risks and optimizing optimal opportunity." (ID 11)

In this context, "safe spaces" and away days were also seen as enablers of open and transparent communication within the board. "Safe space" was used to refer to a boardroom atmosphere where "*nonexecutives are never frightened to challenge the executives*" (ID 11). Absent such an atmosphere, the role of nonexecutives in both holding the executive to account and acting as a "critical friend" was harder to achieve. "Away days" were used to facilitate the sharing of information and opinions in a less formal context, generally regarded as resulting in more creative discussions of risk issues. Some saw this as a means of overcoming time-constrained board meetings with packed agendas, which could otherwise squeeze out meaningful discussions about risk for a more formulaic "tick-box" approach. In some cases, communication was highly informal, relying on ad hoc social interaction:

> "Anyone can phone up the chief exec. In fact, if you buy him a pint of beer, he'll talk to you quite happily" (ID 17).

Finally, effective risk reporting processes that ensured board members had timely, accurate, and complete information on an organization's risk exposures was a common topic of discussion. Interviewees emphasized the importance of an effective flow of information to improve factual knowledge

TABLE 3 Aggregation of categories and themes.

Step 2First-order category	Representative data	Step 3 – Second-order theme
Board roles	"There's a very important role for the board to play, but they are not the executive, they are the governance. And I do think sometimes people get a bit mixed up about what the role is, it is not to manage the company, it is to govern the organization." (ID 2)	*Subject identity*
	"Their main role [nonexecutives] is to hold myself and the group chief executive to account, and to make sure that we have got the processes and procedures in place to manage the risks that we think, as the executive, we think we face. And to challenge us on our assessment of those risks." (ID 18)	
	"The good ones, the execs lead it, the non execs question it and probe it—that's how it should be done. In the weaker companies you'll find it's the non execs who push it and probably even have to introduce it." (ID 1)	
Critical friend	"the NED's job is to sit above and to the side as it were and be a critical friend is one of the good expressions I find to describe what an NED should be…." (ID 1)	
	"we forget that there is a little bit of devil's advocacy that needs to be taken into the boardroom, and you have to be clear about providing the assurance role at board level to stress the executives because, you know, under the pressures that they're under day-to-day, if you don't ask the difficult questions, if you are not saying, well, why do we think that, then we're not doing our job." (Focus Group 2)	
Diversity	"ideally you want nonexecutives with different backgrounds and different perspectives, so you are going to get a kaleidoscope of views" (ID 8)	
	"People, you know, see things from their own perspective and if you get people looking at the same thing from multiple perspectives, you can hopefully see everything in the scene." (ID 15)	
	"a board that's got a lot of diversity in it, in terms of experience, in terms of the industry and other industries, I mean some of the best boards I've worked on, they've had people from pharmaceuticals, financial services, they've just got completely different sense of what makes a good board….I think the first barrier or success factor, if you want to turn it around to the positive is, the composition of the board and its diversity relevant to the context or the plans or the strategic plans of the organization." (ID 11)	
Safe spaces	"..if you don't create that space in which you can have those conversations where sometimes collectively you're needing to enquire into a problem, you're massively increasing the likelihood of things going wrong, so the Chairman needs to create that space in which what you're constantly looking to do is to review and remedy and not to review to blame." (ID 27)	*Practices*
	"..how you have as a board a sensible, meaningful conversation about that interrelationship seems to me to be absolutely critical … [otherwise] … the executives feel that board meetings are a thing to be weathered and got through rather than a place where actually you can have a meaningful discussion .." (ID 27)	
	"Going back to the cognitive barriers and the lack of a safe space for the board is really important. There has to be some acknowledgement that it's okay to say at board level we don't know enough about this as individuals, and we need to be better. That's a very difficult thing for big personalities, big egos, empowered people to say and they also, I think, are being driven partly by an expectation that suggests that it's complicated rather than finding a simpler way to adjust to the decision-making role that they have." (Focus Group 2)	

(Continues)

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TABLE 3 (Continued)

Step 2First-order category	Representative data	Step 3 – Second-order theme
Kicking the tyres	"..when you're out kicking tyres, you're meeting lots of different people, and one of the tests, I think, as a non-exec is, are the messages and the—all the things about culture that you're getting as you go down the organization consistent with the messages that you're getting at the board?" (ID 4)	
	"Every week three or four times a week we'll be in the bar buying young people and clients a pint and saying, tell me what you think, tell me how we can make it better." (ID 17)	
Away days	"when we started putting this [risk] register together, we actually went away for a day, to try and, I suppose, and improve the communication between the different individuals on the board. And improve understanding of what was the real purpose and mission of the company, and how does our appraisal project fit into that? And how would we assess the risks that went against those?" (ID 24)	
Horizon scanning	"we run the business ready for something bad to occur because in my experience, every three to 12 years something bad occurs" (ID 17)	
	"I've been on four FTSE boards, and I know just how poor they are, generally, at recognizing the risk and their own weaknesses" (Focus Group 2)	
Risk reporting	"the genuine enquiry and the information base with which to deal with a flow of information which allows [the board] to ask questions about conditions in the organization is very often missing." (ID 27)	
	"I think you can mistake running a risk register for actually paying attention to and having the flow of information which leads you to understanding around any of those given risks what is currently going on maybe very deep in the organization around are their signs that you're just simply not picking up and paying attention to." (ID 27)	
Risk registers	"It's usually around the risk register, that would usually be sent out to people and it's quite useful if you get a grading of where the risk fits, so whether it's red, green or amber or whatever and they can work that out—what is the impact if this goes wrong? What's the probability of it going wrong? So that story you get and then you put against it the mitigations or the safety procedures you've put in so that's always very useful." (ID 15)	*Objects*
	"I think there is a legacy, there can be a legacy I'm sure as a common, in common with peers, a legacy of let's get the risk register out and blow the dust off every quarter as opposed to why are we doing it and what are we doing it for and are we actually just ticking the box or are we actually helping the company." (ID 22)	
	"So, one of the things I have done as Chair is bring in, sort of take a different view, and actually try and create a risk register that people buy into and feel is a reasonable representation of the strategic risks we face." (ID 20)	
Risk appetite statements	"On a regular basis, at least annually, risk appetite will be part of the guidance and if you like, prescriptive approach that's communicated down through and across the organization so that everyone is clear on the kind of risk appetite the board would like people to take." (ID11)	
	"Risk appetite is one of those things that have been put in by the regulators or whoever and it's very difficult to actually define…… I don't think I've ever been in a meeting where somebody said, our risk appetite is X. It just doesn't work like that." (ID 23)	
	"I have been part of discussions where we have talked explicitly about our risk appetite, but it is a qualitative discussion, and I would argue that the vocabulary that you use is situation specific—it's tough to find a vocabulary that says where you are, so I think partly it's about the unquantifiable nature." (ID 2)	

(Continues)

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TABLE 3 (Continued)

Step 2First-order category	Representative data	Step 3 – Second-order theme
Skills matrices	"the skills matrix assists both in terms of highlighting what skill set we might need from a potential new non-executive, but also with training. So, it helps with deciding what training the board need to engage quickly." (ID 21)	
	"I think that that will be when you're looking at the skills and experience of the board and you do your matrices. You expect to see at least one or two members of the board which have got… particularly a non-executive which has got risk management in their review." (ID 29)	
	"Certain companies do (skills matrices). We don't necessarily do it in the disciplined approach. But it's kind of… It's in around to the way they do the selection of the board members, I believe." (ID 29)	
Committees	"Each of the committees has got at least three directors on it, three out of the ten, but we've also gone down the line of having an external advisor on each committee….. effectively, they can participate as full members of the committee, although they don't have a voting right. But they are, basically, influencing what, then, goes back to the board…. that's actually been quite a good way of getting real expertise in, without imposing the constraints of… being on the board." (ID 24)	
	".so, when the full board meets, although it does have a very clear focus on risk it is basically responding to the work that the risk committee has carried out." (ID 12)	
	"If the regulator wants the board to be more collectively involved in everything, well then, why make us have separate committees? It's, effectively, it's all the board anyway. Would it not be better instead of having a three-hour audit committee, a two-hour risk committee, and then a two-hour board has seven hours on a board meeting, and just do it as part of the board meeting?" (ID 16)	

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and understanding of the risks facing the business, ensuring more informed risk decisions (IRGC, 2009, 2017; Cucinelli et al., 2023). What became clear from our findings, and is supported by other studies (Cucinelli et al., 2023; Todd, 2011; Liaropoulos et al., 2016; Parviainen et al., 2019), is that the deficiencies in risk governance identified by the IRGC (2009, 2017) are still apparent today across a broad spectrum of commercial entities, which to some extent calls into question the effectiveness of COSO/ISO frameworks to tackle these deficiencies.

4.2.3 | Objects

Most interviewees mentioned boards reviewing registers of enterprise-wide risk exposures, although the significance of these registers to strategic risk analysis varied. Some interviewees also regarded the board agenda as important in ensuring appropriate consideration of risk issues. They pointed out that where items such as the risk register were at (or near) the bottom of the list of items on an agenda, they could often be treated in a rushed or perfunctory manner. In some boards, registers were not viewed as at all central to strategic business discussions: "*We wouldn't spend much time on … what you might call a risk register, and it wasn't something that the management team used to manage the business*." (ID 20). Instead, they were considered more of a compliance requirement: "*..bloody hoops we've got to jump through*." (ID 2). Where it provided a focal point for discussion, the risk register was restricted to a small number of the most important and strategic risks. Some interviewees liked receiving pictorial summaries of risks to supplement and/or replace the risk register within the boardroom, using visual aids such as (colored) heat maps, that is, risk matrices. They cautioned against "*dry*," (i.e., stale) risk registers, the design or content of which changed infrequently, which in turn could encourage a "tick box" response. This is a useful insight given the large body of work that has critiqued risk matrices as a means of communicating risk for analysis, including their color, structure, and reliability (Cox, 2008; Cox et al., 2005; Levine, 2012; Monat & Doremus, 2020; Proto et al., 2023; Sutherland et al., 2021). Interviewees often linked the usefulness of registers with the effectiveness of risk communication processes:

> "I think you can mistake running a risk register for actually paying attention to and having the flow of information which leads you to understanding around any of those given risks" (ID 27).

It may well be that the risk register is better suited for less strategic discussion at lower levels of the organization by different institutional actors, where the specificity that can be obtained from them is more purposeful, such as in project management (see, e.g., Andrews et al., 2023).

Another object discussed by some interviewees was a board member skills matrix. The matrix summarizes the skills of board members, identifies potential skills gaps and was generally mentioned when board diversity was regarded as important. Interviewees highlighted the importance of risk management-related skills and the influence of skills matrices on the recruitment and training of directors. We were also told of boards that did not use such matrices but recognized the importance of having a range of competencies on the board. Diversity of experience and understanding among nonexecutives was regarded as key in providing breadth of perception and understanding of risk issues at board level. This issue has seen key corporate stakeholders such as the DCRO Risk Governance Institute take important steps to ensure board members are qualified to exercise their risk management duties (DCRO, 2023). The absence of breadth of awareness, and understanding, of, material issues by board members can create a "bounded rationality" during decision-maker review and judgment (Merkelsen, 2011; Simon, 1997). Interviewees indicated that it was common to recruit nonexecutives from different industries and professions, gender and age groups; broadening a board's focus of attention, enhancing its ability to anticipate and respond to a wider range of risks, and reducing the possibility of "bounded rationality" in board decision-making. This is clearly articulated in Table 1, where 62 companies are represented due interviewees' multiple board membership, with distinct industry sector variation within and across boards.

Similarly, McNulty et al. (2013) examined risk management practices and objects employed by board directors using three behavioral characterizations: effort norms, cognitive conflict (between executives and nonexecutives), and the use of knowledge and skills. Effort norms relate to the time and attention devoted to oversight and monitoring, such as reading board papers and discussing issues in meetings; cognitive conflict relates to the potential for challenge and debate between board directors holding different views; and the use of knowledge and skills relates to how boards integrate and coordinate different director perspectives to reach a collective decision. Boards with high effort norms had a lower exposure to financial risk, especially when combined with higher levels of cognitive conflict, since conflict promoted debate and mitigated the potential for group think. However, cognitive conflict was weaker in more cohesive boards that were able to reconcile their diverse knowledge and skills. They also found, as with this study, that diverse but cohesive boards created an effective behavioral dynamic that "*involves a mix of challenge and support, or control and collaboration*" (McNulty et al., 2013, p. 73).

Finally, interviewees discussed the construction and use of risk appetite statements, a risk object previously researched by Mio et al. (2022). In contrast to other research (Aven, 2013), the interviewees often regarded a risk appetite statement as outlining the types and levels of risk exposure that are deemed acceptable or unacceptable by organizations in the pursuit of their business objectives. Such statements were (at times) used to understand the relative significance of risks as potential opportunities and/or threats and to determine levels of desired or tolerable exposure. Some interviewees regarded

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a risk appetite statement as an object for governance, specifying the "rules of the game" in relation to risk-taking and risk-reduction decisions. However, opinion was divided about it has the ability to set meaningful metrics for risk limits and thresholds. In some areas, like financial services (e.g., in relation to credit and market risk), this was considered possible; "*I guess for financial risk, it's quite easy to set limits, hard limits. So quantitatively easy to measure and then to define our thresholds*" (ID 29). In others, it was felt that objective limits and thresholds were impossible to implement, and we were told that in these boards formal risk appetite statements were less useful in making strategic decisions and that discussions would remain qualitative. Risk appetite statements, declarations that contextualize risk in an instrument of management, and the varied definitions, categorizations, and concepts they encapsulate for the purposes of decision-maker review and judgment, highlight the predicament that can arise as a result of the convergence of risk analysis and management (Aven, 2013; Aven, 2012, Thompson et al., 2005; Linke & Florio, 2019; Mio et al., 2022). What is an effective management tool for some in analyzing risk may not work for others, and to assume otherwise may create unexpected consequences.

4.3 | Institutional logics and the risk logics of boards

Following the earlier discussion of Friedland et al. (2014) concerning institutional logics, we examine the relationship between the subjects, objects, and practices of boards and their relevance for how boards reconcile the duality of risk as threat and opportunity. Our evidence suggests, in line with Friedland et al. (2014), that the "logic" boards apply to reconcile the duality of risk is both revealed through, and constituted by, the subject identities, objects, and practices of those boards. For example, in terms of board decisions on strategic risk issues, the significance given to the "object" of a risk appetite statement affects, and is affected by, "processes" such as the ability of the board to discuss contentious issues concerning risk appetite (safe spaces) or the manner in which other information pertinent to risk appetite arrives at the board (kicking the tires; risk reporting), as well as by how "subjects"—executives and nonexecutives—understand and exercise their roles. This conjuncture of subject, object, and practice constitutes, in Friedland et al.'s (2014) terms, the "institutional substance" of the board's risk decision-making.

In examining this conjuncture in the board room, we found what might be referred to (following our earlier theoretical discussion) as two discernible "substances," or forms of reasoning or logic, inherent to the risk decisions made by boards. There was evidence for what we term a "prescriptive" approach, typified by a tendency toward a more structured, prescriptive attitude to risk decision-making, influenced by regulation and traditional formal processes of risk analysis, for example, identification, assessment, monitoring, and control of risk. Furthermore, we also found evidence for a "principled" approach; a more intuitive, less structured, risk decision-making approach where practices suggested greater emphasis on general entrepreneurial or business "principles." Illustrative evidence from our interviewees for these principled and prescriptive "logics" is set out in Table 4. This evidence also enabled us to discern traits more indicative of one or other approach, and these traits are set out in Figure 1. "One interviewee summed up the position as follows"

> "Some boards are a lot more restrictive about risk and their role in managing risk and others are a great deal less prescriptive and operates much more on the nebulous principles and expects those principles to be adhered to without a great deal of prescriptive guidance for the organization." (ID 11)

Figure 1, while providing further support for framing board room decision-making in terms of the duality of risk, adds to the literature by highlighting characteristics of boards (the first-order categories in Table 3) influencing the positions the boards in our sample took in reconciling the duality of risk as threat or opportunity. For example, we find that the practice of "risk talk" is more indicative of a principled approach, being regarded as less rigid and more informal, malleable, and adaptable in both exploiting opportunities and mitigating threats. In turn it enabled Executive and NonExec Directors to regard themselves as a mutual decision-making unit, combining decision management (i.e., judgment) and decision control (i.e., review) to integrate strategy and risk management practices holistically (e.g., Excerpt 7, Table 4). This could lead to skepticism among some interviewees about the benefit or need for more formal approaches to risk analysis and control with risk being less likely as a formal agenda item in board papers.

By contrast, some interviewees emphasized a more prescriptive approach, following a clear agenda and strictly documented processes and procedures for risk analysis (e.g., Excerpt 5, Table 4). They were more likely to use risk exposure vis-à-vis risk objects such as a risk appetite statement or register/matrix as a means by which to rationalize decision-maker review and judgment. This could be further engrained in a board in which roles were clearly segregated, with decision management conducted by Executives (e.g., Excerpt 2, Table 4), while decision control was incorporated in the "assurance" role of nonexecutives as a means of "protecting" the organization. In these circumstances, interviewees suggested boards tended to focus risk analysis on the prevention of compliance breaches (e.g., Excerpt 11, Table 4), suggestive of a granular, inward-looking approach to risk decision-making. It could be argued that those boards who rely on "objects" such as the risk register as a formal conversation catalyst for strategic decision-maker review and judgment are blinkered by the fact that these documents are focused on the downside of risk that requires protection, as opposed to the value creating opportunities that could be derived from taking such risks. As such those conversations are prescriptively

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TABLE 4 The continuum and fluidity of board risk "logics."

	More principled approach	Fluidity factors	More prescriptive approach
Subject Identity	*"…that's where you need the balance. You've got to have right expertise at the board. You've got to have the people around the board that can ask the right questions: what is our digital strategy? What is our cybersecurity strategy? What is our risk position on all of these… on all of these things?"* (*Focus Group 1 –* ***Excerpt 1***)	Board diversity Boardroom environment (e.g., safe space) Social relations (Executive and NED)	*"You know, in my view, risk management is what's done in an FD's day-to-day job. There is no way a non-exec, regardless of what people are trying to put in place right now around it, can take responsibility for day-to-day risk management. They should be there to make sure there's a strong process, they should be there to ensure the challenge is done, that it's complete and that the activity is appropriate…." (ID 1 –* ***Excerpt 2***)
Object	*"It's fluid, it's got to be—when I say it's got to be in the sense that it would be lovely if you could make it so that you could, if a board could turn around and say actually our risk appetite is 4.3 and that's what it's going to be and we'd all say, yes great we all agree – 4.3 is quite a number and then we'd get a decision and then we'd go, what shall we do? Right, what makes it 4.3? And that's what we'll do but clearly you just can't so to some extent I would say it's unquantifiable and it's certainly imprecise….." (ID 2 –* ***Excerpt 3***) *"If you're at the principles end of the spectrum, that person will be bringing up to the board the bottom-up stuff that he's heard in the risk committee. And the board will be thinking about the strategic risk and how that plays in with the strategic risk and sending that information back down to the risk sub-committee." (ID 11 –* ***Excerpt 4***)	Board skills mix (presence of risk management expertise) Board subcommittees Design of the risk register (size, detail, static, or dynamic)	*"On a regular basis, at least annually, risk appetite will be part of the guidance and if you like, prescriptive approach that's communicated down through and across the organization so that everyone is clear on the kind of risk appetite the board would like people to take"(ID 11 –* ***Excerpt 5***) *"So, we look at our risk register not quite continuously. That's an exaggeration, but we have built the risk register to be part of the business and the board is held to account, you know, formally probably four times a year and informally another four times a year through the board process, thinking about risk." (ID 17 –* ***Excerpt 6***)
Practice	*"risk management is a very important concept for us, but I think that one of the risks of talking about it or making it explicit in some ways almost implies that when it's not explicitly being mentioned, people aren't thinking about risk, and I think most people think about risk all the time." (ID 2 –* ***Excerpt 7***) *"if something happens to competitors, you say to yourself, what would we do if that happened to us? And they're good stimuluses for discussion. The risk of all these things is you end up taking the sharp knives away because people slash their wrists. You've got to be realistic about it. One of the reasons you make profit in business is you take on risk." (ID 4 –* ***Excerpt 8***) *"Do you think a principle-based approach is a facet of laziness?… I'm, sort of, thinking of a couple of FTSE 10 clients of mine that we're working with, where the board are immensely arrogant, because they're very successful and just like, well, of course, this is what we do every day, that's why we're successful. When you start to scratch away from the surface, you hear, actually, no, that did go wrong, or actually, yes, we didn't consider how these risks link together." (Focus Group 1 –* ***Excerpt 9***)	Time pressure (e.g., alleviated by board away days) Intraorganization communication (e.g., board has easy and regular access to c-suite and middle management)	*"if there are incidents, if there's a specific event, that would be reported as and when it happens. But, on top of that, we would also provide them with a report with the details of it…. and then, you know, every six months they'll have a risk register that we will revise." (ID 14 –* ***Excerpt 10***) *"Just because something's prescriptive doesn't mean it's tick-box, because you could prescribe an activity, so, for example, I mean, it's an obvious one, we're going to undertake M&A so therefore we need to do due diligence or something to de-risk this so that we actually increase our certainty of understanding. So, actually, the prescriptive bit could be that you mandate certain activities at certain decision-making junctures to make sure that there is structured consideration of risk, but I wouldn't call that compliance per se, it's just mandating a behavior." (Focus Group 1 –* ***Excerpt 11***)

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FIGURE 1 The boardroom traits in reconciling the duality of risk decision-making.

framed from a position of risk aversion, which may limit reconciliation of the duality of risk by constraining discussions of an "entrepreneurial" nature.

Despite these general tendencies in risk-decision-making among boards and developing Friedland et al's. (2014) approach to institutional logics, it is important to note the contingent nature, and influence, of the subjecthoods, objects, and practices involved in specific board decision-making. As illustrated in the middle column of Table 4, our findings suggest a "fluidity" of decision-making that give rise to a continuum along which the logic of boards' risk-decision-making may be situated. Rarely are boards situated at one extreme or the other, and our interviews illustrated how board decision-making is not static on this continuum. This dynamic feature of board logic may be a more effective way of understanding variability in decision-making and judgment at the strategic level of corporate organizations by taking account of the role of subject identities, objects, and practices key to an institutional logics approach.

To some degree, this seemed to be supported by a recognition among several interviewees that each perspective (Principled and Prescriptive) had both benefits and shortcomings. Our findings therefore also suggest that the logic of a specific board decision might be grounded in the (pre/anti) cautionary principles commonly referred to in the risk analysis literature (Aven, 2019; Aven, 2011a, 2011b; Aven & Renn, 2018; Aven & Renn, 2018; Lofstedt, 2003). However, our findings contribute to this literature by highlighting the importance of examining the subject identities, practices, and objects employed in boards to understand how boards have reached whatever decision-making principle is being practiced at that time.

5 | CONCLUSION

Risk management in modern-day organizations is strategic, requiring a balance to be struck between the mitigation of threats and the exploitation of opportunities—both of which expose organizations to risk (Aven & Aven, 2015; Hayne & Free, 2014, COSO, 2017; ISO, 2018; Purdy, 2010). In applying an institutional logics approach, we contribute to the understanding how the duality of risk as threat and opportunity is resolved by strategic business decision-makers.

Using the context of board directing we contribute to the literature on risk analysis in organizations by showing how the reconciliation of the duality of risk can be understood by examining the performance of decision-maker review and judgment. Following the work of Friedland et al. (2014), we examine the "substantializing practices" (2014:336) of boards, building on work, which situates risk analysis within the realm of risk management practices and objects (Aven & Flage, 2020; Aven & Zio, 2014; SRA, 2017). We illustrate how these practices and objects, coupled with the subject identities of their users, phenomenalize risk decision-making in the boardroom.

Our research has much in common with Bednarek et al. (2021) and Palermo, et al. (2017), but extends their findings in several ways. First, Bednarek et al. (2021) highlight the influence of organizational practices on how risk is treated as either threat or opportunity, but do not consider the relationship between these practices and subject identities or objects, and the manner in which together they both produce and enact the risk decision-making "substance" or logic of the board. While supporting discernible risk logics of threat and opportunity—what we refer to as prescriptive and principled approaches—our findings also suggest that, by examining subject identities, objects and practices at board level it is possible to discern a continuum of potential outcomes arising from risk-related decision-making in boards, These outcomes cannot be assumed to be fixed in terms of the risk "logic" applied to specific circumstances, and are contingent upon the interplay of subject identities, practices, and objects in the specific circumstances of the decision-making. This finding is supported by the work of McPherson and Sauder (2013) who show that professional logics combine in a variety of ways to help resolve institutional complexities such as the duality of risk in organizations.

In response to our research question: Is the duality of risk as opportunity and threat recognized by boards, and how do the subject identities, practices, and objects employed

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in board risk-decision-making give substance, and meaning, to that duality?, we find that boards adopt various risk logics which, either explicitly or implicitly, both recognize and reflect the duality of risk. These logics can be situated on a "principled/prescriptive" continuum of risk decision-making. A more prescriptive approach is likely to promote the precautionary logic of risk as threat, while a more principled approach is likely to reflect an entrepreneurial anticautionary logic that is more attuned to risk as an opportunity.

There are limitations to our research. As it captures the experience of boards at a moment in time, it does not examine how, or why, the risk logics of boards may adapt and change over time. In addition, while it identifies the elements that make up the risk logics of boards, the nature of the evidence gathered meant we did not attempt to examine the relative significance of those elements in particular circumstances or to assess whether particular forms of risk logic can be attributed to particular sectors. We hope, therefore, that our paper will encourage others to research further in this area. That might include exploring through boardroom ethnography whether the process of risk analysis differs in relation to opportunities versus threats, or how risks that involve both threats and opportunities are approached using common decision-making principles already contained within the risk analysis and corporate governance literature. We also hope that helping and encouraging boards to understand their own risk logics may enhance collective decision-maker review and judgment as boards navigate the strategic level risk challenges they face. In turn, this may enable boards to be more explicit and transparent with stakeholder groups about the rationale for their risk decision-making.

In terms of board directing, future research also needs to delve deeper into the risk analysis, changes in board composition, organizational mnemonics, and control activities of specific boards, examining how the subject identities, practices, and objects employed by boards interact over time to influence the decisions they make about risk. In particular, we need to understand how boards move along the principled/prescriptive continuum we have identified, or what may act as a catalyst to moving along the continuum, as they balance the often-competing logics of risk as opportunity and threat.

ACKNOWLEDGMENTS

The authors would like to thank the Association of Chartered Certified Accountants (ACCA) for the funding to conduct this project, in particular Jo Iwasaki and Jamie Lyon who were invaluable in helping to manage the project. This research has been presented at various academic conferences including Academy of Management 2020, SRA-Europe 2022, British Academy of Management 2020, and various ACCA workshops globally and we would like to thank all those who commented in the paper, leading to improvements throughout. The same can also be said for all three referees of this paper, the managing editor—Karen Lowrie, and also the area editor—TerjeAven.

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How to cite this article: Bryce, C., Ashby, S., & Ring, P. (2024). Reconciling risk as threat and opportunity: The social construction of risk in boardrooms. *Risk Analysis*, 1–18. https://doi.org/10.1111/risa.14275

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