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## Expert Directors

Martin Edwards

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# EXPERT DIRECTORS

MARTIN EDWARDS\*

*The board of directors occupies the space between the managers, who control the corporation, and the shareholders, who own the residual claims on it. The board's job is to mitigate agency costs arising from this structure and its primary functions are to monitor managers and manage conflicts of interest between managers and the corporation. For this reason, research into director characteristics and board composition tends to focus heavily on the extent to which individual directors are independent from management and on how many independent directors sit on a given board. Boards, however, do more than just monitor and manage conflicts, and, regardless of what they are doing, they have to gather, process, and act on relevant information. Information gathering and analysis, though, involves costs—costs that individual directors must bear.*

*This Article argues that expert directors can mitigate or reduce overall board information costs because their expertise substitutes for more costly information gathering and analysis. Expert directors provide the greatest benefit when information costs are at their highest. Information costs are highest when two criteria exist: First, when the corporation faces risks that are difficult to quantify or measure, but that may result in catastrophic losses. Second, when the typical generalist director's skillset is insufficient to discern whether*

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\* Forrester Fellow, Tulane University Law School; B. Acc'y., The University of Mississippi; J.D., Duke University. I would like to thank the numerous individuals who provided advice and comments on this Article at various stages of drafting, including colleagues at Tulane University Law School, longtime mentors and gracious supporters at Duke University School of Law, and the many friends who helped me shape and re-shape this Article's thesis. I would also like to specially thank the editors at the *University of Colorado Law Review* for their extensive work on this Article, which is much better for their efforts. I would also like to thank my parents, Prof. Celie and Attorney Eddy, for their advice and comments, as well as always encouraging me to write and write better. Finally, I would like to thank my wife, Attorney Annie, for her substantive advice and for many years of love and support, and especially for supporting my academic career. Any remaining errors are all my own.

*management is acting reasonably with respect to the risk and to contribute intelligently to managing the risk.*

*To illustrate that primary argument, this Article analyzes the information costs, the risks, and the need for expertise that are reflected in Sarbanes-Oxley's "audit committee financial expert" requirement—a rare circumstance where the law has affirmatively encouraged the appointment of expert directors. It then proposes that corporations might soon add cybersecurity experts to their boards because of the high information costs, risks, and need for expertise associated with cybersecurity. The Article concludes with the presentation of a mechanism for encouraging appointment of expert directors that is grounded in enhanced disclosure of director expertise.*

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## INTRODUCTION

The overarching responsibility of modern boards is to mitigate the agency costs that arise from the separation of ownership and control by monitoring managers and managing con-

licts of interest.<sup>1</sup> Determining optimal director characteristics and board composition tends to involve a heavy focus on the extent to which individual directors are independent of management and on how many directors on a given board are independent.<sup>2</sup> Independence is important for reducing the likelihood that boards will fail to hold managers accountable for self-interest or incompetence and for avoiding clear conflicts, like permitting the CEO to set her own salary.<sup>3</sup> But not every problem that boards face involves a clear managerial conflict of interest, and some problems present risks beyond conflicts.<sup>4</sup> As might be expected, the utility of independence wanes when problems traverse from conflicts into specific substantive areas. What is more, the heavy focus on independence<sup>5</sup> has crowded out potentially useful discussions about appointing directors with specific substantive skills, experience, or expertise.<sup>6</sup>

This Article takes a different approach to director characteristics and board composition: it argues that directors with domain expertise—“expert directors”—can improve board decision-making, whether or not the decision involves the usual managerial conflicts of interest. Expert directors’ most useful contribution is to improve boards’ handling of problems with high information costs.<sup>7</sup> High information cost problems are those where the risk facing the corporation is difficult to quantify, where monitoring managers’ actions with respect to the risk is difficult, and where contributing to the management of

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1. See Stephen M. Bainbridge & M. Todd Henderson, *Boards-R-Us: Reconceptualizing Corporate Boards*, 66 STAN. L. REV. 1051, 1053 (2014); Melvin A. Eisenberg, *Corporate Law and Social Norms*, 99 COLUM. L. REV. 1253, 1278 (1999). See generally ADOLF A. BERLE, JR. & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE PROPERTY* (1932).

2. See *infra* Sections I.B, II.A.

3. See Usha Rodrigues, *The Fetishization of Independence*, 33 J. CORP. L. 447, 451 (2008).

4. See, e.g., Zohar Goshen & Richard Squire, *Principal Costs: A New Theory for Corporate Law and Governance*, 117 COLUM. L. REV. 767, 784 (2017) (dividing agency costs into “conflict costs” and “competence costs”).

5. See generally Rodrigues, *supra* note 3.

6. See generally Lawrence A. Cunningham, *Rediscovering Board Expertise: Legal Implications of the Empirical Literature*, 77 U. CIN. L. REV. 465 (2008).

7. E.g., Ran Duchin et al., *When Are Outside Directors Effective?*, 96 J. FIN. ECON. 195, 202–05 (2010) (illustrating that firms with lower information costs—defined as firms for which there was more, better, and more consistent publicly available information—improved their performance following the appointment of outside directors). This Article’s definition of information costs is broader and not as quantitative. See *infra* Section II.B.1.

the risk requires domain-specific knowledge beyond the general business skills and experience of most directors. Expert directors' domain expertise serves as a shortcut for information gathering and analysis within their domains.

One example that ties together information costs, risk, and expertise is a major pivot in business strategy. When Apple decided to pivot from selling its products through resellers to operating retail stores of its own, the risks of the pivot were difficult to quantify because of the long time horizon before the payoff (or the potentially massive write-off) would materialize. Apple's board found itself in a high information cost space: it lacked the retail expertise to effectively evaluate management's implementation of the strategy or contribute usefully to the project. To carry out this new strategy, the board needed to gather, analyze, and use all information relevant to the decision and relevant to overseeing its execution. Facing these high information costs, Apple appointed an expert—Mickey Drexler, the sitting CEO of Gap and a noted retail expert—to its board.<sup>8</sup>

Financial reporting is a domain that involves high information costs, risks, and a need for expertise. Notably, Congress recognized this when it passed the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley). Risks of misstatements or fraudulent financial reporting by managers are notoriously difficult to quantify (and to even discover) even for well-trained auditors. Directors lacking expertise in financial reporting may not be able to stand up to a manager who is stretching financial results or discover if she is cooking the books. Thus, Congress placed a substantial nudge in Sarbanes-Oxley that has resulted in many more corporations appointing financial experts to their boards.

An emerging area that ties together information cost, risk, and expertise is cybersecurity.<sup>9</sup> Cybersecurity is a growing risk area for businesses,<sup>10</sup> but it supposes no obvious conflict of

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8. Alex Heath, *How the CEO of Gap Helped Create the First Apple Store*, CULT OF MAC (May 22, 2012, 11:20 AM), <https://www.cultofmac.com/168770/how-the-ceo-of-gap-helped-create-the-first-apple-store/> [<https://perma.cc/ZM8S-YZL5>].

9. This Article will use the term "cybersecurity" as an umbrella term for a number of issues, including securing information technology resources, preserving trade secrets, protecting personal data belonging to customers and employees, preventing and mitigating data breaches, and other related issues.

10. See generally Kristin N. Johnson, *Managing Cyber Risks*, 50 GA. L. REV. 547 (2016).

interest. Information (both firm-specific<sup>11</sup> and exogenous<sup>12</sup>) about cybersecurity is costly for boards of directors to gather and analyze because it is specialized and complex. Risks of data breaches, lost trade secrets, reputational damage, or failed regulatory compliance add up to an unusually difficult-to-quantify and potentially catastrophic risk—one that most boards currently lack the technical knowledge to evaluate. This Article’s argument, that expert directors reduce or mitigate information costs where risk is high and directors lack expertise, leads to a prediction that corporations may soon begin appointing cybersecurity experts to their boards in greater numbers.<sup>13</sup>

One can imagine several (or more) other domains where an expert director could contribute to solutions or make an impact on corporate governance. Perhaps an environmental expert could improve firm decisions that impact the natural world. Or perhaps a director with expertise in diversity and inclusion could improve the development and maintenance of corporate cultures that do not suborn toxicity or abuse. This presents a line-drawing question for this Article’s thesis: How many and what kind of experts are enough? Or how many are too many? Questions of director characteristics and board composition, viewed this way, may ultimately collapse into less generalizable outcomes from firm-specific needs and limitations. Some firms may appoint some experts that other firms might not need, while others that may need certain experts find that appointing them is cost prohibitive or otherwise on the wrong end of a tradeoff. If cybersecurity becomes a substantive area where direct legislative and regulatory nudging is appropriate, as accounting did with the “audit committee financial expert” re-

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11. For example, the current state of information security in the firm’s systems or products.

12. For example, the most popular current techniques and tricks for hackers.

13. Indeed, a group of senators in 2017 introduced a bill to add a cybersecurity expert director disclosure requirement mirroring Sarbanes-Oxley’s audit committee financial expert requirement. *See* Cybersecurity Disclosure Act, S. 536, 115th Cong. (2017). In 2019, a larger group of senators reintroduced a similar bill. *See* Cybersecurity Disclosure Act of 2019, S. 592, 116th Cong. (2019). Firms may ultimately adopt them without government action, and some are already doing so. *See infra* Section III.B; *see also* Andy Peters, *Ex-Regulator, Cybersecurity Expert Join PNC Board*, AM. BANKER (Jan. 4, 2018, 1:01 PM), <https://www.americanbanker.com/news/pnc-adds-ex-regulator-cybersecurity-expert-to-board> [<https://perma.cc/QL6D-8PXX>] (describing PNC Financial Service Group’s appointment of Linda Medler, a cybersecurity expert, to its board of directors).

quirement of Sarbanes-Oxley, could any substantive area be appropriate for nudging? Instead of proposing a requirement or a nudge toward a specific kind of expert, this Article proposes a new disclosure regulation: firms should disclose (1) if they have any expert directors, (2) what qualifies their purported expert directors as experts, and (3) how they anticipate the expert directors will improve substantive board decision-making.

In sum, corporations should appoint expert directors to deal with matters involving high information costs: problems that involve difficult-to-quantify risks that are outside the general business experience of the average director. This Article proceeds in five parts. Following this Introduction, Part I contains a brief overview of the role, functions, and composition of the modern board of directors. Part II discusses the limitations of independence and develops the core concepts of information costs, risk, and expertise that animate this Article's argument. Part III then applies the information cost-risk-expertise framework developed in Part II to the Sarbanes-Oxley accounting expert and the proposed cybersecurity expert, and then ruminates on a disclosure solution to improve substantive board decision-making. A brief conclusion follows.

## I. BOARD BASICS: THE ROLE, FUNCTION, AND COMPOSITION OF THE BOARD OF DIRECTORS

To better describe how expert directors may help improve corporate performance, reduce liability, or otherwise contribute to better board decision-making, a brief look at the current role, function, and composition of the modern corporate board will be helpful. This Part illustrates what boards do and identifies areas where expert directors could improve board decision-making.

### *A. Directors: What They Do and How They Do It*

Under the laws of almost every state, all of a corporation's business and activities take place under the management and supervision of a board of directors.<sup>14</sup> Nonetheless, the legal status of the board of directors as the central actor in corporate

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14. DEL. CODE ANN. tit. 8, § 141(a) (2016); MODEL BUS. CORP. ACT § 8.01(b) (AM. BAR ASS'N 2016).



law does less to explain what boards and individual directors actually do.<sup>15</sup> This Section describes the legal and practical landscape of the public corporation board.

### 1. The Three Board Functions: Monitoring, Management, and Service

The modern board has three functions: monitoring managers, managing parts of the business where managers are conflicted, and providing services.<sup>16</sup> The first function, monitoring managers, is the most discussed and most important board function because of its centrality to the agency costs story of the corporation.<sup>17</sup> The monitoring function emerged because of the perceived critical need to mitigate the agency costs arising from separation of ownership and control.<sup>18</sup> Control of corporations resides with the managers, who make most day-to-day decisions about how to use corporate assets. Ownership, as it were, refers to the shareholders that possess the “residual claim” on the corporate assets—that is, those within the corporate hierarchy most likely to desire significant profits from the use of the assets. The shareholders, widely dispersed and perhaps many in number, lack the means to effectively monitor the managers’ use of the assets in the business. Thus, the board sits in the middle to ensure that managers are carrying out the goal of increasing the profits for the shareholders.

Much corporate law commentary focuses on how boards carry out this function and whether they are actually any good at it.<sup>19</sup> Likewise, corporate law scholarship has long focused on

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15. See, e.g., Bainbridge & Henderson, *supra* note 1, at 1059–60.

16. *Id.* at 1060.

17. Donald C. Langevoort, *The Human Nature of Corporate Boards: Law, Norms, and the Unintended Consequences of Independence and Accountability*, 89 GEO. L.J. 797, 801–02 (2001). The “agency costs story of the corporation” refers to the widely accepted understanding that the separation of ownership (widely dispersed shareholders) and control (corporate managers) creates costs because managers will have incentives to shirk their duties or convert the assets of the corporation to their own ends instead of the shareholders’. See generally Eugene F. Fama & Michael C. Jensen, *Separation of Ownership and Control*, 26 J.L. & ECON. 301 (1983); BERLE & MEANS, *supra* note 1.

18. See Bainbridge & Henderson, *supra* note 1, at 1056–57; Lubomir P. Litov et al., *Lawyers and Fools: Lawyer-Directors in Public Corporations*, 102 GEO. L.J. 413, 418 (2014).

19. See Bainbridge & Henderson, *supra* note 1, at 1056–57; Langevoort, *supra* note 17, at 797–98 (describing the popular conception of the board as “an illusion

proposing optimal doctrinal, legal, and regulatory structures, and encouraging private development of governance norms, which cast the directors as vigorous and rigorous advocates of shareholder interests against any potential shirking or conversion by corporate managers.<sup>20</sup>

The second function, management, begins with the understanding that all legal authority to manage the firm resides in the board.<sup>21</sup> Subject to a few non-delegable statutory responsibilities,<sup>22</sup> boards typically delegate the day-to-day operation of the corporation to professional managers.<sup>23</sup> In addition to the non-delegable statutory responsibilities, other retained managerial responsibilities usually involve the sort of decisions about which managers' personal interests are most likely to be in conflict with those of the corporation.<sup>24</sup> Decisions such as who should be the CEO, how much she should be paid, who else should sit on the board, and who should be in charge of financial reporting all create opportunities for managers to pursue their own interests instead of the best interests of the corporation.<sup>25</sup>

High-level or general risk management is another space where boards tend to exercise a bit more of their managerial authority.<sup>26</sup> Since certain risks drive higher board information costs, expert directors may be best suited to deal with the most complex and difficult risks, instead of just risks arising from conflicts of interest.

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of a governing body that acts largely as an elite private club with a rubber stamp").

20. Bainbridge & Henderson, *supra* note 1, at 1056–57.

21. DEL. CODE ANN. tit. 8, § 141(a) (2016); MODEL BUS. CORP. ACT § 8.01(b) (AM. BAR ASS'N 2016); Bainbridge & Henderson, *supra* note 1, at 1059–60.

22. These include: approving mergers and acquisitions, sales of all or substantially all corporate assets, issuing stock, paying dividends, and amendments to governing documents such as articles and bylaws. Bainbridge & Henderson, *supra* note 1, at 1060 n.35.

23. *Id.* at 1060.

24. Langevoort, *supra* note 17, at 802–03.

25. See *infra* Section I.A.2 for a further explanation of notable management functions that most boards retain due to managerial conflicts.

26. See *infra* Section I.A.2; see also Betty Simkins & Steven A. Ramirez, *Enterprise-Wide Risk Management and Corporate Governance*, 39 LOY. U. CHI. L.J. 571, 585–86 (2008). But see Kristin N. Johnson & Steven A. Ramirez, *New Guiding Principles: Macroprudential Solutions to Risk Management Oversight and Systemic Risk Concerns*, 11 U. ST. THOMAS L.J. 386 (2014) (identifying shortcomings of an approach that entrusts corporate governance with risk management processes).

The third and final function, service, represents perhaps the least-discussed modern board function. Since the beginning of the modern board, directors have often been well-known or well-respected members of the business community or other relevant communities.<sup>27</sup> These directors often bring with them business networks that can increase the availability of financing or connect the corporation with new vendors or customers.<sup>28</sup> Perhaps more mundanely, directors bring general business knowledge and experience to help senior management sharpen their own decision-making within their delegated authority.<sup>29</sup> Nonetheless, the board's service function is generally thought to be less important than its monitoring and managing functions.<sup>30</sup>

## 2. The Board Committees that Monitor and Manage

Boards often delegate authority over a number of board decision-making processes and activities to subdivisions, commonly known as committees.<sup>31</sup> Since significant board activities take place within board committees, a brief review of common board committees and their functions is useful.<sup>32</sup> In part, boards work in committees because some activities involve acute conflicts that make it appropriate to exclude non-independent directors entirely from participating.<sup>33</sup> Thus, commit-

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27. See Stephen M. Bainbridge, *Why a Board? Group Decisionmaking in Corporate Governance*, 55 VAND. L. REV. 1, 43–44 (2002).

28. *Id.* This is a long-standing feature of boards, but it is not always favored. William O. Douglas, *Directors Who Do Not Direct*, 47 HARV. L. REV. 1305, 1313 n.27 (1934). Similarly, former politicians or public servants often occupy board seats, especially in heavily- or moderately-regulated industries. See generally Richard H. Lester et al., *Former Government Officials as Outside Directors: The Role of Human and Social Capital*, 51 ACAD. MGMT. J. 999 (2013) (analyzing and isolating attributes of former federal officials who serve on boards of directors).

29. See Langevoort, *supra* note 17, at 802–03.

30. See Bainbridge & Henderson, *supra* note 1, at 1061–62.

31. See Thuy-Nga T. Vo, *To Be or Not to Be Both CEO and Board Chair*, 76 BROOK. L. REV. 65, 85–86 (2010) (discussing delegation of board duties to board committees).

32. Kevin Chen & Andy D. Wu, *The Structure of Board Committees 2* (Harv. Bus. Sch., Working Paper No. 17-032, 2016).

33. See Rodrigues, *supra* note 3, at 485 (describing CEO pay as a “self-evident” example of a conflicted area where exclusively independent directors make decisions).

tee structures and processes impact board decision-making in important ways.<sup>34</sup>

Practically all large, public corporations have the following committees: nominating, audit, and compensation.<sup>35</sup> These committees, and the extent to which their members are independent, are thought to play an important role in monitoring managerial decision-making and avoiding managerial conflicts. Nominating committees select and appoint directors for election, compensation committees design pay packages for senior management, and audit committees manage financial reporting and the outside accountants who conduct the corporation's annual audit.<sup>36</sup> The managerial conflicts in these three areas are reasonably clear. If management could handpick all the directors, the board might be biased toward management prerogatives; if management decided how to compensate itself, it might overpay or choose a compensation package without any effort to align its personal interests with those of the corporation; if management were in charge of the audit process, it could cover up its own financial misstatements and pressure the outside auditor not to recommend restatements.<sup>37</sup> The near ubiquity of modern nominating, audit, and compensation committees is tied closely to the monitoring and conflict management functions of the board.<sup>38</sup>

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34. Board committee structure is a somewhat unstudied feature of corporate governance. See Chen & Wu, *supra* note 32, at 2. Furthermore, some independence regulations, for example, require disclosure of whether certain *committee* members are independent, not just whether the board is independent or how many directors on the whole board are independent. See Gregory Shill, *Independent Directors as Shield?* (unpublished manuscript) (on file with author) (citing audit committee independence requirement).

35. These are required under NYSE and NASDAQ listing requirements. See NYSE, LISTED COMPANY MANUAL § 303A (2019); NASDAQ, MARKETPLACE RULES § 4200(a)(15) (2006). Occasionally, nominating will be called “nominating and governance” or something similar.

36. See Eisenberg, *supra* note 1, at 1278–79 n.70; see also Sarbanes-Oxley Act, 15 U.S.C. § 78j-1(m)(3) (2012).

37. See Bainbridge & Henderson, *supra* note 1, at 1079 (discussing federal regulations designed to solve conflict-of-interest problems in auditing).

38. For exemplary commentary, see Harold M. Williams, SEC Chair, Address at the Sixth Annual Securities Regulation Institute, Corporate Accountability—One Year Later (Jan. 18, 1979), <https://www.sec.gov/news/speech/1979/011879williams.pdf> [<https://perma.cc/L9V2-2LVA>].

*B. The Triumph of the Monitoring Model and the Rise of Director Independence*

As with much of public corporation law, the modern board emerged along with the expansion of widespread public investment in very large firms.<sup>39</sup> In the 1930s, Berle and Means<sup>40</sup> contributed an early evaluation of the problems with the separation of ownership from control. The landscape they presented showed that managers exercised actual control and that shareholders were dispersed and lacked power. Directors seemed to be seated on boards for show,<sup>41</sup> solely for their business connections,<sup>42</sup> or because they were socially connected to the managers.<sup>43</sup> In large public firms, few owners of major blocks of shares sat on boards, mostly because at that time there really were not many owners of major blocks of shares in large public firms.<sup>44</sup> While boards did retain the meaningful power to hire, fire, and compensate senior management, they often faced withering criticism for their lack of attention to that function.<sup>45</sup> Boards in the middle of the twentieth century faced an identity crisis. Some thirty or forty years after Berle and Means, corporate governance theory and practice slowly gave

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39. See Melvin A. Eisenberg, *The Board of Directors and Internal Control*, 19 CARDOZO L. REV. 237, 238–39 (1997) (discussing the emergence of the modern monitoring board). Though information about the governance of relatively large firms existing prior to the early twentieth century is limited, at least one notable study suggests that boards (1) actually managed the corporation and (2) consisted of stockholders with significant, if not always majority, holdings. See Eric Hilt, *When Did Ownership Separate from Control? Corporate Governance in the Early Nineteenth Century*, 68 J. ECON. HIST. 645, 649 (2008).

40. BERLE & MEANS, *supra* note 1.

41. Bainbridge & Henderson, *supra* note 1, at 1063 n.51 (“[B]usiness colonels of the honorary type—honorary colonels who are ornamental in parade but fairly useless in battle.” (quoting William O. Douglas, Chairman, Sec. & Exch. Comm’n, Address at a Luncheon of the Fort Worth Clearing House Association (Jan. 8, 1939), in DEMOCRACY AND FINANCE: THE ADDRESSES AND PUBLIC STATEMENTS OF WILLIAM O. DOUGLAS 46, 46 (1940))).

42. Bainbridge, *supra* note 27, at 43.

43. Bainbridge & Henderson, *supra* note 1, at 1071.

44. See Hilt, *supra* note 39, at 649; see Zohar Goshen & Sharon Hanes, *The Death of Corporate Law*, (ECGI Law Working Paper No. 402/2018, 2018) (discussing the shift from widely dispersed investors reliant upon corporate law to capital concentrated in institutional investors who exert market pressure on corporate boards and managers).

45. Bainbridge & Henderson, *supra* note 1, at 1063; Eisenberg, *supra* note 1, at 1278.

new life to the board by formalizing the board's role of monitoring the managers.<sup>46</sup>

This seeming consensus—that the board's overarching role should be supervisory—resulted in the emergence of another key feature of modern corporate governance: director independence. As the board's monitoring role took shape, director independence emerged as the most significant factor driving director selection and board composition.<sup>47</sup> Given this significance, this Article's explanation of director expertise would be incomplete without discussion of director independence.

### 1. Defining Director Independence

Defining director independence is like trying to nail Jell-O to a tree—a “true” definition is elusive in both theory and practice. Different authorities provide different definitions, and applying some or all of them across contexts is difficult. This Section strives to gather and present the extant literature on the subject as briefly as possible.

State corporate law, stock exchange listing standards, and Securities and Exchange Commission (“SEC”) disclosure regulations all supply differing definitions of director independence.<sup>48</sup> Delaware common law provides a rather general standard, finding that directors are independent unless there exist “such facts as would demonstrate that through personal or other relationships the directors are beholden to [a] controlling person.”<sup>49</sup> Given that its courts decide many cases challenging transactions, Delaware's approach is transaction-specific.<sup>50</sup>

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46. Eisenberg, *supra* note 1, at 1278–79.

47. Langevoort, *supra* note 17, at 797–98.

48. See Yaron Nili, *Out of Sight, Out of Mind: The Case for Improving Director Independence Disclosure*, 43 J. CORP. L. 35, 47–52 (2017); see, e.g., NASDAQ, *supra* note 35, § 4200(a)(15); NYSE, *supra* note 35, § 303A.

49. *Aronson v. Lewis*, 473 A.2d 805, 815 (Del. 1984) (standard of review), *overruled on other grounds*, 817 A.2d 149 (Del. 2002). As another court put it: “At bottom, the question of independence turns on whether a director is, for any substantial reason, incapable of making a decision with only the best interests of the corporation in mind.” *Parfi Holding A.B. v. Mirror Image Internet, Inc.*, 794 A.2d 1211, 1232 (Del. Ch. 2001), *rev'd on other grounds*, 817 A.2d 149 (Del. 2002). The common shorthand for this, according to the *Aronson* court, is that a director is “dominated and controlled” by management. *Aronson*, 473 A.2d at 816.

50. Rodrigues, *supra* note 3, at 466. For example, Delaware gives more deference to decisions of special litigation committees when their members are independent of the managers and directors whose decisions are being challenged. See, e.g., *Zapata Corp. v. Maldonado*, 430 A.2d 779, 788–89 (Del. 1981) (holding

The NYSE and NASDAQ listing requirements are more operationalized, providing that an independent director may not currently be or have been employed by the corporation in the prior three years, cannot be an immediate family member of a manager, and cannot be affiliated with another corporation that derives substantial revenue from the firm.<sup>51</sup> The two exchanges also require the board to conclude, subjectively, that proposed independent directors do not maintain unspecified relationships with the corporation that materially impact their exercise of independent judgment.<sup>52</sup> Similarly, the SEC requires corporations to disclose which standards they use to determine independence, which members are independent, and which members (if any) of the corporation's nominating, audit, or compensation committees are not independent.<sup>53</sup> Complete financial independence is not required, and is probably impossible anyway. Directors provide valuable services,<sup>54</sup> and very few would work without compensation. Though family relationships<sup>55</sup> preclude independence, other personal and social relationships do not always result in a non-independent director.<sup>56</sup>

Scholarly discussion of independence fills volumes.<sup>57</sup> And director independence is nothing if not an elegant theory. Pro-

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that an independent committee of the board may, after a reasonable investigation, properly obtain dismissal of a derivative action).

51. NASDAQ, *supra* note 35, § 4200(a)(15); NYSE, *supra* note 35, § 303A.

52. NASDAQ, *supra* note 35, § 4200(a)(15); NYSE, *supra* note 35, § 303A.

53. 17 C.F.R. § 229.407 (2018).

54. Bainbridge & Henderson, *supra* note 1, at 1053.

55. *E.g.*, NYSE, *supra* note 35, § 303A.02(b), gen. comm. ("An 'immediate family member' includes a person's spouse, parents, children, siblings, mothers and fathers-in-law, sons and daughters-in-law, brothers and sisters-in-law, and anyone (other than domestic employees) who shares such person's home.").

56. *See* Nili, *supra* note 48, at 54–55 (explaining that while social ties may impair independence, restrictions on such ties do not find their way into formal definitions of independence). *But see, e.g.*, *Beam ex rel Martha Stewart Living Omnimedia, Inc. v. Stewart*, 845 A.2d 1040, 1053–54 (Del. 2004) (suggesting in dicta that personal or professional ties could result in a finding of a lack of independence).

57. As Professor Usha Rodrigues notes, "Behind all of these [independence] rules lurks the belief that, by closing off connections to management, rulemakers can create the ideal board." Rodrigues, *supra* note 3, at 455. The name most commonly associated with independence is Melvin Eisenberg, who provided the most thorough early defense of monitoring and independence as the primary purpose of the board. *See, e.g.*, Bainbridge & Henderson, *supra* note 1, at 1056 n.20 (citing MELVIN A. EISENBERG, *THE STRUCTURE OF THE CORPORATION: A LEGAL ANALYSIS* 170–85 (1976)). The trend continues. *See* Lucian A. Bebchuk & Assaf Hamdani, *Independent Directors and Controlling Shareholders*, 165 U. PA. L. REV. 1271, 1293 (2017) (proposing "enhanced-independence directors" in

fessor Usha Rodrigues nicely states the aspirational version of director independence: “The ideal board member brings to the boardroom business expertise. She is intelligent, committed, willing to ask tough questions, but also able to work with management.”<sup>58</sup> If the goal of filling boards with independent directors is to provide an *ex ante* process protection for shareholder interests—as opposed to relying on *ex post* litigation to deter director dereliction of duty—the current standards for independence are generally good.<sup>59</sup> Many modern large-firm directors (and boards) are independent, at least nominally.<sup>60</sup> Furthermore, as predicted by two Delaware chancellors,<sup>61</sup> 60 percent of modern large-firm boards have only one non-independent director: the CEO.<sup>62</sup> Independence has remained and will remain an important principle in board composition.

## 2. The Law and Ordering of Director Independence

Potential legal or regulatory reforms discussed in this Article notwithstanding, expert directors are more likely to emerge in an evolutionary way through private ordering than through law or regulation. This Part provides a brief overview of the law of director decision-making and director independence, as well as the extent to which director independence has emerged from private ordering.

There is no particular point in time when independence became the law. Like most governance decisions, individual director attributes and board composition—whether involving independence or otherwise—generally have been a step or two removed from formal corporate law. Of course, Delaware

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controlled firms who would be “more accountable to public investors and less dependent on the controller”).

58. Rodrigues, *supra* note 3, at 463.

59. As many persuasively argue, they could also be improved. See generally Nili, *supra* note 48.

60. *Id.* at 45–46.

61. William B. Chandler III & Leo E. Strine, Jr., *The New Federalism of the American Corporate Governance System: Preliminary Reflections of Two Residents of One Small State*, 152 U. PA. L. REV. 953, 1002 n.119 (2003).

62. Nili, *supra* note 48, at 45–46. Even so, many corporate governance experts have called for completely independent boards, or at least for severing the CEO position from the board chair position. See Usha Rodrigues, *A Conflict Primacy Model of the Board*, 2013 U. ILL. L. REV. 1051, 1071 (advocating a completely independent board); Vo, *supra* note 31, at 77–78 (providing an overview of the debate regarding whether the CEO and board chair positions should be severed).



courts' evaluation of directors' interests in any challenged transaction or context has rendered director attributes an important part of governance,<sup>63</sup> but Delaware does not hold directors liable *merely* for not being independent. For the most part, director attributes and board composition are left to private ordering under state law.<sup>64</sup>

Indeed, Delaware's hands-off approach to business judgments provides significant space for private ordering to occur. Directors and officers of corporations owe fiduciary duties of care and loyalty to the corporation. Generally, the only way for shareholders to recover damages for breaches of those duties is to bring a derivative action—that is, an action on behalf of the corporation—against the directors and officers of the corporation to recover from them personally.<sup>65</sup> Layers of legal insulation, both through legislative charter options and procedural hurdles in litigation, make shareholder suits that actually reach the merits somewhat rare. In Delaware, for example, corporations have long been permitted to “opt out” of the fiduciary duty of care in their charters.<sup>66</sup> Even if they did not, a shareholder claim alleging a breach of fiduciary duty must, prior to filing, be presented to the board via a “demand,” or it must be shown that demand would be futile because the directors are not disinterested.<sup>67</sup> Upon demand, most boards will appoint a special litigation committee of new and independent directors, who then exhaustively investigate the allegations and often conclude that pursuing the derivative action is not in the best interest of the corporation.<sup>68</sup> To the extent a claim may be

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63. See Rodrigues, *supra* note 3, at 466.

64. See Jonathan R. Macey, *Corporate Law and Corporate Governance a Contractual Perspective*, 18 J. CORP. L. 185, 186–87 (arguing in favor of “enabling” corporate law consisting primarily of “default rules,” which leave space for private parties to set the terms of the corporate arrangement); see also Edward B. Rock & Michael L. Wachter, *Islands of Conscious Power: Law, Norms, and the Self-Governing Corporation*, 149 U. PA. L. REV. 1619, 1619, 1675 (2001).

65. See STEPHEN M. BAINBRIDGE, CORPORATE LAW § 8.5 (2015); DEL. CODE ANN. tit. 8, § 102(b)(7) (2019).

66. DEL. CODE ANN. tit. 8, § 102(b)(7) (2019).

67. See, e.g., *Brehm v. Eisner*, 746 A.2d 244, 256–57 (Del. 2000).

68. See Kenneth B. Davis, Jr., *Structural Bias, Special Litigation Committees, and the Vagaries of Director Independence*, 90 IOWA L. REV. 1305, 1306 (2005). Nonetheless, one of the few empirical studies of special litigation committee (SLC) actions shows that SLCs do not *uniformly* recommend dismissal. See Minor Myers, *The Decisions of the Corporate Special Litigation Committees: An Empirical Investigation*, 84 IND. L.J. 1309, 1320 (2009). Nonetheless, of Professor Myers's ninety-seven evaluated SLCs, only ten recommended pursuing the claims.

presented as a breach of the duty of loyalty,<sup>69</sup> formal independence of directors and an extremely high burden of showing a self-interest act to foil any effort to put the merits of the directors' or officers' conduct before a court.<sup>70</sup> Finally, boards' "Caremark duty"<sup>71</sup> to establish a reporting and control system is minimal.<sup>72</sup>

Also notable, many corporate governance actions now take the form of securities fraud actions under the Securities Exchange Act of 1934.<sup>73</sup> Procedurally, securities fraud claims of this form are simpler, but the standard of misconduct that a plaintiff must show to recover is higher.<sup>74</sup> The SEC occasionally nudges governance reforms through disclosure requirements,<sup>75</sup> though it is often foiled when it tries to push substantive governance structures.<sup>76</sup> Sarbanes-Oxley, though, empowered the SEC to affirmatively require listed firms to compose their audit and compensation committees entirely of independent directors.<sup>77</sup>

In light of these legal limitations, market demand for various governance features has arguably overtaken judicial development of doctrine, legislation, and regulation as the most common mode of corporate governance reform.<sup>78</sup> Professor Mel-

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69. See *Stone v. Ritter*, 911 A.2d 362, 370 (Del. 2006) (articulating a failure to monitor claim against corporate directors as a violation of the fiduciary duty of loyalty).

70. See *Shill*, *supra* note 34; see also *Zapata Corp. v. Maldonado*, 430 A.2d 779, 788–89 (Del. 1981).

71. *In re Caremark, Inc.*, 698 A.2d 959 (Del. Ch. 1996); see also *Ritter*, 911 A.2d at 362.

72. Stephen M. Bainbridge, *Caremark and Enterprise Risk Management*, 34 J. CORP. L. 967, 973 (2009).

73. See 15 U.S.C. § 78j(2)(b) (2012); see also Robert B. Thompson & Hillary A. Sale, *Securities Fraud as Corporate Governance: Reflections upon Federalism*, 56 VAND. L. REV. 859 (2003).

74. The standard for securities fraud actions of this sort is making a false statement purposefully, knowingly, or recklessly, whereas the typical derivative standard is gross negligence. Thompson & Sale, *supra* note 73, at 897, 866.

75. For example the "audit committee financial expert." 15 U.S.C. § 7265 (2012).

76. See, e.g., *Bus. Roundtable v. SEC*, 905 F.2d 406, 413 (D.C. Cir. 1990) (holding that the SEC had acted outside its statutory regulatory authority when it compelled stock exchanges to prohibit dual-class share structures).

77. See 15 U.S.C. § 78j-1(m)(3).

78. See *Rock & Wachter*, *supra* note 64, at 1675. For a stronger version of this claim, see *Goshen & Hannes*, *supra* note 44, at 2–3 (arguing that institutional and activist investors have grown powerful enough to lessen the need for legal and regulatory enforcement of corporate governance norms).

vin Eisenberg described this phenomenon in the context of the gradual but complete acceptance of the monitoring model of the board.<sup>79</sup> Professor Eisenberg first developed and advocated for the monitoring model in the 1970s, but it did not represent the consensus framework for board activities until the 1990s.<sup>80</sup> In 1999, Professor Eisenberg described the process of accepting the monitoring model as the business and investment communities' slow realization of its economic value.<sup>81</sup> Similarly, Professor Shill noted how even corporations that are not required by Sarbanes-Oxley to have independent audit committees still do.<sup>82</sup> Taking this claim a step further, Professors Zohar Goshen and Sharon Hannes argue in a forthcoming work that institutional investors and other activists have achieved a level of market power that renders doctrinal and regulatory backstops against management—that is, a law of corporate governance—less necessary.<sup>83</sup> The dynamic relationship between sources of corporate governance is interesting for a lot of reasons,<sup>84</sup> but for the purposes of this Article, it is enough to say that a proposal to appoint expert directors for various reasons may be something that emerges as an innovation through a process of private ordering, at least at first. Just as director independence ultimately emerged as a privately ordered phenomenon (despite occasional nudges from the SEC and Delaware courts), perhaps expertise is also suited for this sort of evolutionary development.<sup>85</sup>

## II. WHERE INDEPENDENCE ENDS AND EXPERTISE BEGINS: FINDING THE EXPERT DIRECTOR

Despite its importance, independence has limitations. Heavy discussion of and focus on director independence have crowded out examination of how directors approach the sub-

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79. Eisenberg, *supra* note 1, at 1279.

80. Bainbridge & Henderson, *supra* note 1, at 1062.

81. Eisenberg, *supra* note 1, at 1279.

82. Shill, *supra* note 34.

83. See generally Goshen & Hannes, *supra* note 44.

84. See Langevoort, *supra* note 17, at 800 (concurring with others that social norms play a major role in the adoption of corporate governance provisions).

85. See, e.g., DELOITTE, 2016 BOARD PRACTICES REPORT 31 (2016) (suggesting that boards are voluntarily improving their understanding of and education regarding cybersecurity).

stance of important decisions.<sup>86</sup> To be sure, independence will always be important given the ever-present possibility that a manager will act in her own interest first and the corporation's second and it will remain a counterbalance for these conflicts.<sup>87</sup> But not all corporate decisions and issues are exclusively about conflicts, and even conflicted decisions have substantively complex components.<sup>88</sup> A key question: Is the board *just* a conflict manager, or is it a meaningful participant in monitoring and managing the substance of business decisions? If the latter is true or desired to be true, then why is all of the discussion about independence? Independence is suited for conflict management but is not necessarily as useful for solving substantive problems. And, furthermore, what have been the results of the focus on director independence?

Expert directors can solve some of the problems at the edge of the usefulness of independence. This Part looks briefly at the limitations of independence and presents this Article's core contribution: a three-part framework for identifying the problems that expert directors can solve. This framework consists of information costs, difficult-to-quantify risks, and the need for expertise.

### A. *Limitations of Independence*

According to the theory of director independence outlined above, the ideal independent director is a vigorous defender of shareholder interests who brings clear-eyed and unconflicted judgment against insiders who are biased by their personal salaries, benefits, and sometimes idiosyncratic interests.<sup>89</sup> In practice, the requirements for independence mean meeting the various definitions discussed above.<sup>90</sup> Aligning the theory of in-

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86. See Bainbridge & Henderson, *supra* note 1, at 1066.

87. Rodrigues, *Conflict Primacy*, *supra* note 62, at 1068–69 (explaining why the current view of the board fails and a completely independent board focused on dealing with conflicts is superior).

88. See *infra* Section III.A (discussing Sarbanes-Oxley's independence and expertise rules for audit committees).

89. See Shill, *supra* note 34; *supra* Section I.B.1; Rodrigues, *supra* note 3, at 463. Insiders also have a significant information advantage, which can result in bias or an enhanced ability to conceal fraud or other malfeasance. See Bainbridge & Henderson, *supra* note 1, at 1065–66.

90. *Supra* Section I.B.1. See, e.g., NASDAQ, *supra* note 35, § 4200(a)(15); NYSE, *supra* note 35, at § 303A, et. seq.; Sarbanes-Oxley Act, 15 U.S.C. § 78j-1(m)(3)(B) (2012). As Professor Rodrigues usefully explains, these sorts of features

dependence with a practical way to implement it has been challenging.<sup>91</sup>

Several commentators persuasively argue that independence has been defined and implemented in an unsatisfactory way.<sup>92</sup> They argue that corporations (or, perhaps more accurately, shareholders)<sup>93</sup> cannot reap the full value of independence if the governing definitions of independence do not establish true or actual independence.<sup>94</sup> Viewed this way, the issue with independence may not be its theoretical limitations, but its practical ones. If formal independence is insufficient to achieve the proposed benefits of actual independence, the board's monitoring function in particular will be impaired.

As a number of scholars have noted, empirical work on the value of independent boards and directors points in multiple directions.<sup>95</sup> Though a full examination of the abundant literature on independent directors is outside the scope of this Article, the empirical literature as a whole has not reached a firm conclusion.<sup>96</sup> Early research, for example, tended to show that director independence did not improve decision-making overall, while more recent research seems to show the opposite.<sup>97</sup> Director independence has been studied and dissected in numerous ways across numerous companies and industries, and that research continues apace in both the theoretical and

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are only proxies for the true, theoretical "independence" of a director. See Rodrigues, *Fetishization*, *supra* note 3, at 463 (citing Langevoort, *supra* note 17, at 798).

91. See Rodrigues, *Fetishization*, *supra* note 3, at 484–85 (proposing, on the basis of longstanding Delaware law principles, a transactional instead of checklist-oriented approach to director independence).

92. See, e.g., Nili, *supra* note 48, at 53 ("Unfortunately . . . the current definitions of director independence miss the mark in providing shareholders with an effective system for ensuring the true independence of their 'independent' directors.").

93. As Professor Shill persuasively argues, managers and the directors themselves can reap personal benefits from independent boards, but the purpose of independent boards is to benefit *shareholders*, not to shield management or result in personal wealth or status increase to individual directors. See Shill, *supra* note 34.

94. Nili, *supra* note 48, at 53.

95. See, e.g., Roberta Romano, *The Sarbanes-Oxley Act and the Making of Quack Corporate Governance*, 114 YALE L.J. 1521, 1529–33 (2005).

96. *Id.*

97. See, e.g., Sanjai Bhagat & Brian Bolton, *Director Ownership, Governance and Performance*, 48 J. FIN. & QUANTITATIVE ANALYSIS 105, 132–33 (showing, inter alia, that independence reduced value prior to 2002 but tended to increase it later).

empirical literature. Additionally, as Professor Gregory Shill argues in a forthcoming article, independent boards often serve to shield management from market discipline through their transaction-cleansing function.<sup>98</sup> Professor Shill's observation illustrates the potential downside of implementing independence at the expense of other values by showing how it can result in *less* managerial accountability overall. This provides a nice example of how independence, while useful within its conflict-focused frame, may ultimately cause mischief outside of it.

Ultimately, the limitations of independence do not undermine its value as a mode of avoiding and mitigating conflicts. Instead, the apparent limitations on independence suggest that some problems or aspects of some problems arise because of something other than conflicts. If this is true—and the board by law or practice is supposed to be involved with solving such problems—independence is an incomplete solution.

*B. Information Costs, Difficult-to-Quantify Risks, and the Need for Expertise*

One response to the unsatisfactory results of the focus on monitoring and independence is to expand the focus of corporate governance from conflicts and independence to substance and expertise. Specifically, appointing expert directors can reduce or mitigate board information costs that arise from difficult-to-quantify risks in complex domains usually understood only by experts. This Section borrows from an eclectic blend of literature in an effort to develop a useful, if imperfect, definition of information costs and identify a class of risks that make overall information costs higher because they are more difficult to quantify, oversee, and manage.<sup>99</sup> It shows that these features make such risks uniquely suited for greater attention from the board. Then, it demonstrates how some—though per-

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98. Shill, *supra* note 34; *see also* Langevoort, *supra* note 17, at 802 (discussing the cleansing of various transactions); *infra* Section II.C.2.

99. These include: traditional economics literature on transactions costs and information costs, enterprise risk management (ERM), financial institution risk-weighted capital requirements (Basel Accords, primarily II & III), and theoretical and empirical literature on business risk. As might be expected, this section cannot possibly be as precise and thorough as the work done in these fields.

haps not all—of these risks involve areas of technical specialization and expertise.

### 1. Information Costs

Individual directors and boards incur information costs as they gather firm-specific and exogenous information that they need to make decisions.<sup>100</sup> Making sense of all the information gathered is another information cost.<sup>101</sup> Indeed, the corporation and the board of directors both emerged to better process information:<sup>102</sup> individual investors do not have the time, resources, or inclination to gather and process all the information themselves. As several scholars have recognized, information costs can be a component of agency costs,<sup>103</sup> but they are also part and parcel of general decision-making costs.<sup>104</sup> The costs of gathering and analyzing information explain the general use of information within markets and firms, as well as *why* and *how* the board became the repository for relevant information about and affecting the corporation.

To fulfill their duties to their corporations, boards must, at a minimum, maintain and use a reporting and information sys-

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100. See Bainbridge & Henderson, *supra* note 1, at 1077–78.

101. Alchian and Demsetz, (and later Blair and Stout) describe the very concept of “team production” within the firm as part of the response to information costs. See Armen A. Alchian & Harold Demsetz, *Production, Information Costs, and Economic Organization*, 62 AM. ECON. REV. 777, 779–85 (1972). The basic idea is that obtaining the information needed to disaggregate some type of production by measuring its individual inputs (as you would if it were just people contracting in a market and not working as a team) is cost prohibitive. Therefore, firms operate as teams, so that particular information is less important. Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 265–69 (1999).

102. See Stephen M. Bainbridge, *Director Primacy: The Means and Ends of Corporate Governance*, 97 NW. U. L. REV. 547, 558–59 (2003).

103. See Simone M. Sepe, *Intruders in the Boardroom: The Case of Constituency Directors*, 91 WASH. U. L. REV. 309, 313 n.8, 318 n.31 (2013) (citing Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 J. FIN. ECON. 305, 309, 312–19 (1976)) (discussing managers’ use of private information for personal gain as a form of shirking).

104. See George J. Stigler, *The Economics of Information*, 69 J. POL. ECON. 213, 224–25 (1961) (discussing examples of where people expend costs searching for and processing information), see also Bainbridge, *supra* note 102, at 566–67 (discussing how branching hierarchies within corporations facilitate the flow of information).

tem.<sup>105</sup> Likewise, individual directors are supposed to inform themselves as necessary to carry out their functions.<sup>106</sup> Unavoidably, then, directors must incur costs to educate themselves on numerous aspects of the firm's business, industry, and internal workings. These costs are even steeper for independent directors.<sup>107</sup> Some of this information is less costly to obtain—a lot of relevant financial information is publicly available, and, at least theoretically, management should be sharing important information with directors regularly. Industry-specific knowledge or information, though, often takes significant time and effort to develop.<sup>108</sup>

Similarly, *domain-specific* knowledge and information take time and resources to develop.<sup>109</sup> For example, becoming an expert in accounting and auditing usually requires specific education, a rigorous professional certification, and a number of years of practical experience.<sup>110</sup> Of course, a generalist director can develop an approximation of accounting expertise through self-education, but this is quite costly as well.<sup>111</sup>

As risk and complexity increase, directors must spend more time learning, hire expert consultants (i.e., purchase the expertise instead of develop it themselves), make requests on management to provide useful information,<sup>112</sup> and otherwise expend resources. Given some of the incentives and constraints facing directors (and especially independent directors), some directors will expend less effort than necessary to inform them-

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105. See *In re Caremark, Inc.*, 698 A.2d 959 (Del. Ch. 1996); *Stone v. Ritter*, 911 A.2d 362 (Del. 2006).

106. See *Aronson v. Lewis*, 473 A.2d 805, 812 (Del. 1984) (the business judgment rule begins from the presumption that directors act on an informed basis).

107. See *Bainbridge & Henderson*, *supra* note 1, at 1065–66.

108. *Id.* at 1066.

109. See, e.g., William G. Chase & Herbert A. Simon, *Perception in Chess*, 4 COGNITIVE PSYCHOL. 55, 55–56 (1973). In this now-famous study, the authors theorized about why master chess players could reconstruct chess positions much faster than beginner chess players. *Id.* at 55. Their ultimate conclusion was that the experienced player could extract more information from a chess board after five seconds of viewing than a beginner. *Id.* at 80–81.

110. See *infra* Section III.A.2.

111. *Id.*

112. See, e.g., Oliver Williamson, *Corporate Governance*, 93 YALE L.J. 1197, 1198 (1984) (describing how insiders are invited to board meetings to deliver relevant information); see also Sepe, *supra* note 103, at 340–41 (discussing how constituency directors appointed by venture capital firms gain access to information that reduces the firm's investment monitoring costs).



selves.<sup>113</sup> And even those directors who *do* expend the necessary resources to inform themselves may still not be able to learn enough. Some risks are deep, complex, difficult to measure, and potentially catastrophic. For these risks, information costs are likely to be at their highest.

## 2. Difficult-to-Quantify Risks

Difficult-to-quantify risks get (or should get) more attention at the board level—that is, they are the risks on which directors should expend the most resources. Of course, *all* risks are ultimately the responsibility of the corporate board of directors and therefore contribute to director information costs.<sup>114</sup> But directors have limited time and capacity to obtain and analyze information—they only meet a few times a year, they typically have other full-time jobs or are retired, and they do not have access to important information about the company that only insiders possess.<sup>115</sup> This means they have to prioritize matters best suited for their role and functions.<sup>116</sup> This Section begins with an extensive, but likely incomplete, categorization of the risks corporations face. It occasionally forgoes technical or general language in favor of interesting details or examples. Then, it hones in on what kinds and categories of risks are more difficult to quantify, predict, and measure.

Most public corporations face three broadly defined categories of risk: market risk, credit risk, and operational risk.<sup>117</sup>

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113. Bainbridge, *supra* note 27, at 40.

114. See *supra* Section I.A (describing the legal responsibility of the board for the corporation).

115. See *supra* Section I.A.1; Bainbridge & Henderson, *supra* note 1, at 1064–65.

116. See Rodrigues, *supra* note 62, at 1055 (proposing a fully independent board that focuses all its energy on managing conflicts).

117. Bainbridge, *supra* note 72, at 969. Other nominal risks include strategic risk and reputational risk. See BASEL COMM'N ON BANKING SUPERVISION, INTERNATIONAL CONVERGENCE OF CAPITAL MEASUREMENT AND CAPITAL STANDARDS (2004) [hereinafter BASEL II], <https://www.federalreserve.gov/boarddocs/press/bcreg/2004/20040626/attachment.pdf> [<https://perma.cc/4M89-VSP6>]. The Basel Committee on Banking Supervision is a committee of the Bank of International Settlements. *The Basel Committee—Overview*, BANK FOR INTERNATIONAL SETTLEMENTS, <https://www.bis.org/bcbs/index.htm?m=3%7C14> (last visited April 5, 2019) [<https://perma.cc/6J6J-HN64>]. Composed of numerous central banks and other financial regulators from around the world, the Basel Committee on Banking Supervision promulgates prudential standards for the regulation of

Market risk describes the risk that some asset or investment will underperform due to market conditions.<sup>118</sup> Credit risk describes the risk that various counterparties will default or become less creditworthy over time.<sup>119</sup> Operational risk is the broadest category and includes everything from management failure to fraud.<sup>120</sup> While the following paragraphs delve into market risk and credit risk, most of the space is devoted to operational risks—the types of risks more likely to result in the need for expert directors.

Market and credit risks have traditionally been easier to quantify than operational risk, and therefore easier to manage.<sup>121</sup> Thus, these classes of risk are easier for boards to oversee. The board's role in risk oversight generally is to evaluate the level of risk that managers are taking and to ensure that the managers' risk appetites are consonant with the board's established company-wide risk appetite.<sup>122</sup> With straightforward and established metrics, boards can review market and credit risks, passing upon them like ordinary financial reports. Similarly, because market risk and credit risk are associated with

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banks. *Id.* “Basel II” refers to the second set of standards, which the committee first published in 2004. The standards are useful for this Article because they contain a significant depth of analysis on different categories of risk; risk modeling is of utmost import to bank regulators, as bank failures can result in greater systemic impacts and financial instability than ordinary business failures. Firms deal with market risk and credit risk in a number of different ways. *See, e.g.,* Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1363 (2011) (discussing how firms may diversify risk exposure across business lines or purchase various insurance contracts to manage risk).

118. Bainbridge, *supra* note 72, at 969.

119. *Id.* at 969–70.

120. *Id.* at 969 (citation omitted). For the sake of simplicity, this Article includes strategic, legal, and reputational risks under the operational risk umbrella. Basel II expressly excludes “strategic” and “reputational” risk from operational risk, but includes legal risk. BASEL II, *supra* note 117, at 137. It does not really explain the reasoning behind this choice.

121. *See* Kimberly D. Krawiec, *The Return of the Rogue*, 51 ARIZ. L. REV. 127, 138 (2009) (quoting BASEL COMM'N ON BANKING SUPERVISION, OVERVIEW PAPER FOR THE IMPACT STUDY 7, ¶ 43 (2002)).

122. *See* Martin Lipton et al., *Wachtell Lipton Discusses Risk Management and the Board of Directors*, COLUM. L. SCH. BLUE SKY BLOG (Apr. 4, 2018), <http://cls.bluesky.law.columbia.edu/2018/04/04/wachtell-lipton-discusses-risk-management-and-the-board-of-directors/> [https://perma.cc/DR3V-V3XY].

profits, the payoffs or write-offs from these risks can also be quantified more easily.<sup>123</sup>

Operational risk is not always as easy to define as market and credit risk. It includes so many different contexts and business processes that developing a comprehensive view is much more difficult.<sup>124</sup> Operational risk encompasses a number of categories: high-frequency, low-magnitude event risks; internal controls risks (including strategic, legal, and reputational risks); and tail risks (i.e., low-frequency, high-magnitude event risks).<sup>125</sup>

The costs of high-frequency, low-magnitude operational risks—like an employee making an error when entering data or knocking off an hour early on Friday—are generally so minimal that they represent rounding errors on many financial reports.<sup>126</sup> Thus, they are a type of operational risk that boards do not typically prioritize and that are unlikely to necessitate expert directors.

Internal control risks vary in their frequency, cost, complexity, and certainty. Long-term and uncertain projects, major shifts in strategy, litigation or compliance exposure, and similar happenings in the life of a business fall outside the ordinary inputs-in, outputs-out business rhythm.<sup>127</sup> Sometimes, litigation and compliance risks are more like high-frequency, low-magnitude operational risks,<sup>128</sup> while at other times they can be less frequent but of a higher magnitude.<sup>129</sup> Boards typically expend more of their resources on developing and monitoring managers' work in implementing broad, general strategy than they do on high-frequency, low-magnitude risks.<sup>130</sup>

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123. Krawiec, *supra* note 121, at 138. Though market and credit risk may sometimes be mismeasured, operational risk is *relatively* more difficult to analyze and evaluate than are market and credit risk. *Id.* at 129–30.

124. *Id.* at 134–35.

125. *See id.* (dividing operational risk as defined in Basel II by frequency and magnitude). This Article includes reputational risks with tail risk.

126. *Id.*

127. *See, e.g.,* Heath, *supra* note 8 (describing Apple's appointment of retail expert Mickey Drexler to its board).

128. *See* Krawiec, *supra* note 121, at 134–35 (discussing the minimal impact of these risks).

129. *See, e.g.,* Steven Baicker-McKee, *Reconceptualizing Managerial Judges*, 65 AM. U. L. REV. 353, 371 n.106 (2015) (defining the oft-used term “bet-the-company litigation” to include cases that jeopardize the continued existence of a business).

130. Bainbridge & Henderson, *supra* note 1, at 1061.

Tail risks—low-frequency events that are catastrophically costly—are the most feared and difficult-to-quantify of all risks.<sup>131</sup> Since they are rare, data for building models of tail risks are scarce.<sup>132</sup> For example, many commentators have described the run on shadow banking that kicked off the 2007–2008 financial crisis as a tail risk event.<sup>133</sup> As discussed in Section III.B, *infra*, information security risk is best conceived of as a tail risk.<sup>134</sup> Reputational risk can also occasionally be a tail risk—while a reputation can deteriorate over time,<sup>135</sup> a tail risk event can cause swift and severe damage to a corporation’s reputation.<sup>136</sup> It is also true, though, that tail risks can lurk in the market- and credit-risk arenas.<sup>137</sup>

These difficult-to-quantify risks vex corporations and therefore demand greater board attention for two related reasons. First, managers and directors have less confidence in the design and implementation of whatever model or system is going to quantify the risk for monitoring purposes.<sup>138</sup> Creating risk models that accurately predict when a manager will steal or shirk, when some catastrophic external event will occur, whether a major strategic move will succeed, and how much any of it will cost is probably impossible.<sup>139</sup> It makes sense, then, that most innovation in the operational risk management space consists of developing and implementing internal controls—such as developing a nonfraternization policy to avoid liability for sex discrimination, or mandating vacations for ac-

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131. See Krawiec, *supra* note 121, at 135, 149–51 (discussing the troublesome and difficult-to-quantify nature of low-frequency, high-cost events).

132. *Id.* at 150.

133. Bainbridge, *supra* note 72, at 971–72.

134. See *infra* Section III.D.2.

135. See, e.g., Matt Phillips, *G.E. Dropped from the Dow After More Than a Century*, N.Y. TIMES: DEALBOOK (June 19, 2018), <https://www.nytimes.com/2018/06/19/business/dealbook/general-electric-dow-jones.html> [<https://perma.cc/WT3R-TB9N>].

136. Judith Rehak, *Tylenol Made a Hero of Johnson & Johnson : The Recall That Started Them All*, N.Y. TIMES (Mar. 23, 2002), <https://www.nytimes.com/2002/03/23/your-money/IHT-tylenol-made-a-hero-of-johnson-johnson-the-recall-that-started.html> [<https://perma.cc/K7ZN-GSEV>].

137. Anabtawi & Schwarcz, *supra* note 117, at 1359 (discussing the connection of risks from low-probability events to activities such as Enron’s preservation of its credit rating through securitizing debts off balance sheet).

138. See Krawiec, *supra* note 121, at 129–30 (describing the difficulty of measuring operational risk for the purposes of analyzing the soundness of banking institutions).

139. See *id.* at 129–130, 150.

counting staff to avoid embezzlement.<sup>140</sup> To be sure, efforts to expand effective measurement of operational risk have been underway for some time and there has been a substantial push toward copying over complex market risk models into the operational risk space.<sup>141</sup> The problem with tail risks, though, remains that their rarity leads to a paucity of data on which to build models.<sup>142</sup> The problem with operational risk generally remains the broad context in which it arises, its complexity, and the lack of a direct association between operational risk and profit or loss.

Second, difficult-to-quantify risks demand greater board attention because boards cannot easily develop incentive packages for managers to properly calibrate these risks. Directors naturally endeavor to compensate managers for taking *some* kinds of risks—for example, managers should take market risks so the corporation and shareholders benefit from the rewards (profits). On the other hand, directors usually do not attempt to compensate managers for acting reasonably with respect to operational risks and tail risks. This is because operational risks are not usually tied to a later measurable increase in profits or reward.<sup>143</sup> In recognition of the difficulty in creating adequate incentive packages in the operational risk space, boards end up taking a more active role in overseeing and managing operational risks than they do in overseeing market risk and credit risk.<sup>144</sup>

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140. As discussed below, this is why audit committees take an active role in developing and monitoring internal controls. *See infra* Section III.A.2.

141. *See* BASEL II, *supra* note 117, at 144-48. Professor Eric Talley also created a notable tail risk model for the probability of an individual audit firm failure and subsequent industry failure. *See* Eric L. Talley, *Cataclysmic Liability Risk Among Big Four Auditors*, 106 COLUM. L. REV. 1641 (2006).

142. Krawiec, *supra* note 121, at 150.

143. *Id.* at 136.

144. Also notable is at least one empirical study indicating that CEO compensation increases in profitable years but does not decrease after poor years. *See* Lucian A. Taylor, *CEO Wage Dynamics: Estimates from a Learning Model*, 108 J. FIN. ECON. 79, 96 (2013). The study illustrates that CEO compensation is usually “downwardly rigid.” *Id.* This may suggest that an operational risk failure resulting in large losses probably would not result in a CEO’s compensation decreasing in a future year anyway. Some scholars have called for doing away with incentive-based CEO compensation altogether, suggesting perhaps that even incentivizing reward-seeking is not all that useful. *See, e.g.*, Dan Cable & Freek Vermeulen, *Stop Paying Executives for Performance*, HARV. BUS. REV. (Feb. 23, 2016), <https://hbr.org/2016/02/stop-paying-executives-for-performance> [<https://perma.cc/CM4Z-C4LL>] (collecting research on whether higher incentive pay results in higher performance and concluding that it does not); *see also, e.g.*, Dan

Several commentators have persuasively argued that corporations are just not that good at managing market and credit risks and often overlook potential catastrophes associated with tail risks—whether the fault of managers, directors, or both.<sup>145</sup> The history of financial crises and corporate implosions is littered with stories of managers' and directors' failures to address risks of all kinds—whether the easier-to-measure market and credit risks or the impossible-to-measure tail risks.<sup>146</sup> It may be, as Professor Rodrigues once argued, that boards simply cannot contribute much beyond dealing with conflicts.<sup>147</sup> Nonetheless, the monitoring-conflicts-independence paradigm took many years to emerge and come into focus.<sup>148</sup> Perhaps a supplementary view toward expertise is unfolding as well.

Notably, difficult-to-quantify risks do not always involve an obvious conflict of interest, or even if they do, they usually involve some component that is not clearly a conflict. Embezzlement and self-dealing certainly represent conflicts, but cooking the books or trading rogue do not always look like conflicts to directors monitoring these actions in real time.<sup>149</sup> Operational risks arising from human error or weak managerial judgment do not necessarily suggest disloyalty.

In sum, risks that are difficult to quantify, that are hard to incentivize, and that can result in catastrophic losses, are those that should always rise to the board level. There are many different ways for boards to approach these risks. Director independence provides a check on conflicted or biased judgment. Specialized board committees to deal with specific conflict areas help control conflicts with managers' individual interests. Reporting systems that provide information to the committees

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Ariely et al., *Large Stakes and Big Mistakes*, 76 REV. ECON. STUD. 451, 467 (2009) (concluding that incentivizing for creative, nonroutine tasks can result in lower performance).

145. For example, Professors Anabtawi and Schwarcz illustrated how market participants struggle to account for risks—particularly tail risks that exist within market and credit risk categories. See Anabtawi & Schwarcz, *supra* note 117, at 1365.

146. *Id.*

147. Rodrigues, *supra* note 62, at 1055.

148. See Eisenberg, *supra* note 1, at 1279 (discussing the thirty years it took for businesses to accept the monitoring model and independent directors).

149. Posting high profits *looks* like it aligns with shareholder interests—until the fraud is uncovered or the rogue takes a big loss. See Krawiec, *supra* note 121, at 154–58.

or the entire board help ensure that the board has the best information on board-level risks. But when should boards turn to director expertise?

### 3. Expertise

Risk is only half of the reason that certain matters cause directors to incur greater information costs. Directors' independence, general business skills, and experience are often enough to adequately monitor managers, manage conflicts, and meaningfully contribute to big-picture strategy and risk management. Other matters are not as user-friendly. The expertise criterion should separate situations where general business skills and experience are sufficient to evaluate management's reasonableness in dealing with difficult risks from situations where they are not.

A brief look at the current state of board expertise is an appropriate starting point for this discussion both in light of this Article's primary argument about the potential value of expert directors and in light of the need to situate expert directors within the present understanding of board composition. Institutional investors as varied as CalPERS and BlackRock have called on the public companies in which they have significant holdings to disclose the "skills and experience" that individual directors bring to their boards.<sup>150</sup> The SEC in 2009 amended Item 401 of Regulation S-K to expand disclosure on director skills and experience.<sup>151</sup> Some—though not many—companies disclose a "skills matrix" (a table with general skills on the left and the directors' names across the top), with checkmarks in the columns of directors who possess those skills.<sup>152</sup> These skills matrices are not uniform, are not re-

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150. See CALPERS, GOVERNANCE AND SUSTAINABILITY PRINCIPLES pt. III.a.9 (2018) (proposing director attributes including various types of expertise, skills, and experience); BLACKROCK, BLACKROCK INVESTMENT STEWARDSHIP: GLOBAL CORPORATE GOVERNANCE AND ENGAGEMENT PRINCIPLES 5 (2017) (discussing evaluation of director skills and experience).

151. Proxy Disclosure Enhancements, 74 Fed. Reg. 68,361 (Dec. 23, 2009) (codified at 17 C.F.R. § 229.401(e)).

152. See, e.g., MICROSOFT CORP., NOTICE OF ANNUAL SHAREHOLDERS MEETING AND PROXY STATEMENT 20 (2018). Director biographies also often discuss the skillsets or experience that their directors bring to the table. *E.g.*, *id.* at 21–27.

quired by the SEC<sup>153</sup> or any other regulator, and do not necessarily make clear whether a given director is a “general business expert” with experience as a business executive or a “domain expert.” Because of this, existing skills disclosures have not provided enough useful information on why and when a board might appoint people with certain specialized skills, except, perhaps, to demonstrate the firm-specificity of skills and experience on boards.<sup>154</sup>

This Article emphasizes “domain expertise” and endeavors to propose a somewhat generalizable view of when corporations might appoint expert directors.<sup>155</sup> Domain experts are people who have specialized technical knowledge within an area or field.<sup>156</sup> Past theoretical and empirical papers have described bankers<sup>157</sup> and lawyers, among others, as such “domain experts.”<sup>158</sup> By contrast, skills matrices often contain categories as general as “leadership” or “financial.”<sup>159</sup> While empirical researchers have not yet supplied a uniform definition of “expert” for directors, most of the studies tend to look for many years of experience in a specialized field<sup>160</sup> or other credentials.<sup>161</sup>

A domain expert is someone with either (a) multiple years of direct experience in a domain, (b) an advanced degree and record of research in a domain, or (c) other professional experiences or education that suggest a deeper-than-general knowledge of a particular domain. “Direct experience” means something more than just being the CEO of a company. For example, the CEO of a bank might be a domain expert in *bank-*

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153. Some companies use them in connection with their Item 401(e) disclosures. See Proxy Disclosure Enhancements, *supra* note 151.

154. See *infra* Section III.D (comparing and contrasting two Microsoft directors’ skills and experience in an effort to decide whether either or both are experts).

155. There are numerous firm-specific reasons that some corporations may or may not appoint experts for various matters.

156. For this Article’s definition, see *infra* Section II.B.4.

157. Juan Almandoz & Andras Tilcsik, *When Experts Become Liabilities: Domain Experts on Boards and Organizational Failure*, 59 ACAD. MGMT. J. 1124, 1124 (2016) (defining a domain expert as a person with industry experience and performing an empirical study within the banking industry).

158. See generally Litov et al., *supra* note 18; Craig C. Albert, *The Lawyer-Director: An Oxymoron?*, 9 GEO. J. LEGAL ETHICS 413 (1996).

159. *E.g.*, MICROSOFT CORP., *supra* note 152, at 20.

160. *E.g.*, Almandoz & Tilczik, *supra* note 157, at 1124.

161. See generally Bilal et al., *Audit Committee Financial Expertise and Earnings Quality: A Meta-Analysis*, 84 J. BUS. RESEARCH 253 (2018) (using Sarbanes-Oxley definition).



*ing*, but only have general experience in management or accounting and auditing.<sup>162</sup> General business skills and experience can be quite enough to monitor and manage some risks, but domain expertise is likely to be more useful for others.

Consider the above-referenced basic internal control: mandatory vacations for accountants.<sup>163</sup> Most directors with management, executive, or general business experience understand why this is considered an internal control best practice and how to evaluate management's implementation of it. That is, they understand that if one person has complete control over certain financial records, she could both siphon money to herself and update the records strategically to avoid detection. The mandatory vacation ensures that, at some point, the potential embezzler would lose control of the means to update the records strategically. The questions that directors might ask are straightforward: Do we require the accountants with custody of important accounts to take vacation? Did they actually take vacation last year?

Apple's appointment of retail expert Mickey Drexler to its board in 1999 is an example of when a major pivot in strategy—best conceived of as a strategic risk<sup>164</sup>—called for a board-level solution. Apple had access to a lot of expertise when it made the retail pivot. It hired a seasoned veteran with retail experience to be the manager of the retail project,<sup>165</sup> and it could have hired consulting firms. Confronted with a menu of ways to deal with its hard-to-quantify risk and lack of expertise in retail, Apple chose to appoint an expert director whose years as a retail executive helped Apple mold its research strategy and gave the board a better feel for evaluating results.<sup>166</sup> Other

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162. Notably, in implementing Sarbanes-Oxley, the SEC permitted anyone with CEO experience to be an audit-committee financial expert. *See infra* Section III.A.2.

163. *See supra* Section II.B.2.

164. *See id.*

165. *See* Rita Warkov, *Steve Jobs and Mickey Drexler: A Tale of Two Retailers*, CNBC (May 22, 2012, 11:12 AM), <https://www.cnbc.com/id/47520270> [<https://perma.cc/7QDW-RA57>] (discussing Ron Johnson, another retail expert, as the inside manager tasked with developing and implementing the retail strategy). Research has not uncovered whether Apple did or did not hire outside consultants to assist with the retail strategy as well.

166. A similar way to view this scenario is simply that Mr. Jobs wanted a confidential expert advisor to act as a "sounding board" or "kitchen cabinet" for this strategically risky move. *See* Jeffrey N. Gordon, *The Rise of Independent Directors in the United States 1950-2005: Of Shareholder Value and Stock Market*

examples from the limited empirical literature on expert directors have shown that they add value in a number of areas, though not always.<sup>167</sup>

In sum, information costs are at their highest when boards deal with difficult-to-quantify risks—indeed, they are of unique importance to boards trying to maximize their limited resources. This category of risks is not amenable to straightforward quantitative results, and there is not yet a straightforward way to incentivize managers to deal reasonably with these kinds of risks. These risks can also sometimes be catastrophic. Domain expertise becomes valuable when these risks implicate an area of specialized technical expertise or field of study that is beyond the knowledge of the typical general-business-expert director.

#### 4. Sketching the Expert Director

Professor Rodrigues once sketched the ideal independent and independent-minded director.<sup>168</sup> Her sketch included not only the formal idea that the ideal independent director fit a definition of independence, but also the more nuanced idea that the ideal independent director should make substantive decisions with an independent mind. This Section makes a similar effort, proposing a sketch of the ideal expert director. Not only does it supply a formal view of what makes a director an expert, but it also captures the value of improved substantive decision-making.

The expert director is, of course, a domain expert. A director with domain expertise delivers at least two benefits. First, the director's domain expertise provides a shortcut for the information-gathering and analysis processes that individual directors have to do. The expert director supports the board's monitoring function through her ability to credibly and comprehensively understand the steps that managers are taking to mitigate difficult-to-quantify and potentially catastrophic risks without having to expend as much effort learning about them as a director lacking domain expertise would. Management could be spending too much money, ignoring certain pitfalls, or

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*Prices*, 59 STAN. L. REV. 1465, 1513–14 (2005) (describing the board prior to the current “monitoring board”).

167. See, e.g., Bilal et al., *supra* note 161.

168. Rodrigues, *supra* note 3, at 463.

approaching an issue too aggressively or conservatively. In all cases, the director's domain expertise means she already has the tools to discern whether any of these risks are materializing. Since all directors—even experts—lack the relative certainty that comes with good risk measurement, difficult-to-quantify risks present an information-cost-increasing challenge to boards that an expert director is better equipped to surmount.

Second, the domain expert provides a valuable source of expertise to the other directors. As noted above, directors can always seek outside expertise, but at least one study has indicated that directors are more likely to trust a fellow director (who shares their fiduciary duties, among other responsibilities and perspectives) than an outsider.<sup>169</sup> Directors often lament that they are duty bound to pass upon all sorts of complex risks and wish that they had more understanding of the subject matter giving rise to the risk.<sup>170</sup> Obtaining this understanding involves incurring information costs. The more complex the risk, the higher the information costs. The expert director not only delivers expertise for her own account and to her committee assignments, but also can share subject-matter understanding with fellow directors. This provides a shortcut of sorts that saves other directors—and thus the board as a whole—time, capacity, and other resources. The resulting benefit is that the entire board becomes more knowledgeable about the relevant domain at a lower cost because it has an expert in its midst.

### C. Drawbacks and Roadblocks

As with any proposal to reconstitute something as important or interconnected as the corporate board, there are increased costs and potential tradeoffs. There are at least three primary drawbacks to appointing more expert directors. First, the need for boards to retain independent directors for clearly conflicted matters, such as compensation and corporate-life-

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169. Albert, *supra* note 158, at 417 n.9. Within this Article's information-costs framework, this suggests that nonexpert directors are more likely to trust an expert who is a fellow director (as opposed to a consultant), thus indirectly reducing her own information costs due to the lower cost expended to ensure that the expert is providing "good" information.

170. See, e.g., J. Yo-Jud Cheng & Boris Groysberg, *Why Boards Aren't Dealing with Cyber Threats*, HARV. BUS. REV. (Feb. 22, 2017), <https://hbr.org/2017/02/why-boards-arent-dealing-with-cyberthreats> [<https://perma.cc/K2XV-XA5A>].

changing transactions means that companies might face a tradeoff between appointing a new director who is an expert and an independent director that is a generalist. Second, there is a risk that experts might become just as deferential to management in their substantive decision-making as independent directors sometimes become when monitoring and managing conflicted issues. Moreover, generalist directors might defer too much to their expert colleagues. Third, there might be an upper bound on the number of board seats available and limits on how to allocate them for other important values and interests. These potential costs are outweighed by the benefits of expertise, and, in some cases, expertise strengthens or complements other important goals that corporations seek to achieve when composing their boards.

### 1. Add Expertise Without Subtracting Independence

The market's overwhelming demand for (and supply of) independent board decision-making suggests value.<sup>171</sup> As discussed above, firms may find additional value in looking beyond independence for expertise in certain circumstances.<sup>172</sup> Nonetheless, there are times and places where corporations will have to choose between someone more independent and someone with greater expertise.

Among the established independent committees—nominating, compensation, and audit<sup>173</sup>—it may be that independence remains more important than expertise when a clear tradeoff between a more independent director and a domain expert presents itself.<sup>174</sup> Yet again, though, the importance of independence in avoiding conflict—such as ensuring that management does not exert influence over nominations or its own pay—suggests neither a particularly difficult-to-quantify risk nor one where expertise is needed to mitigate it. Thus, adding expert directors to corporate boards does not require impairing

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171. See Shill, *supra* note 34 (noting that controlled companies that are not required to have majority independent boards still tend to do so voluntarily).

172. *But see* Rodrigues, *supra* note 62, at 1055 (arguing that directors really cannot do much beyond manage conflicts).

173. See *supra* Section I.A.2.

174. Bainbridge & Henderson, *supra* note 1, at 1066 (discussing how independence requirements essentially excluded anyone with knowledge of complex financial instruments from bank boards).

independence where it is needed—it only suggests expanding into expertise where it is needed.

## 2. Avoiding Inappropriate Cleansing of Board Decisions

As Professor Shill argues, the modern majority- and supermajority-independent board, practically by design, functions to shield managers from market discipline because the independence of the directors provides a measure of cover for managers' decisions.<sup>175</sup> Similarly, even some formally independent directors remain informally biased toward management.<sup>176</sup> Expertise could mitigate this problem by providing substantive support for, or resistance to, the managerial position, instead of just "cleansing" it.<sup>177</sup> Furthermore, having experts as full board members makes fellow board members more likely to trust them.<sup>178</sup> While this trust and confidence may be good if the expert is living up to the idealized version of her role, it could result in other directors abdicating their own voices and votes in deference to their expert colleague. Thus, one potential risk is that bona fide expertise, just like bona fide independence,<sup>179</sup> could result in further insulation of managerial decisions instead of providing a check on them.<sup>180</sup> Likewise, bona fide expertise can still be wrong, and other directors may abdicate their vigorous consideration in favor of deference to the expert.

Nonetheless, and despite these two potentially troublesome forms of deference, expertise does provide a substantive check on hard-to-quantify and technical risks. Thus, those sharing Professor Shill's concern about transaction cleansing might have greater confidence in managerial decision-making

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175. Shill, *supra* note 34.

176. See Davis, *supra* note 68, at 1307–08 (providing examples of various director biases).

177. See *id.* (comparing "cleansing" of transactions to shielding from market discipline); Langevoort, *supra* note 17, at 802.

178. See Albert, *supra* note 158, at 417 n.9.

179. Shill, *supra* note 34; see Rodrigues, *supra* note 3, at 463 (describing the current standards for independence as more of a proxy for the desired independence).

180. Delaware courts tend to take into account director expertise when deciding whether to defer to business judgments. See *supra* Section II.B.2. It is not necessarily the law that directors with expertise are subject to higher fiduciary duties, but certainly expert directors would be aware that decisions within their domain will be subject to judicial review.

that is monitored by a board with a domain expert, instead of directors who are merely formally independent. Deference and abdication are probably unavoidable, and, at the margin, deference to expertise may be better than deference to self-interested managers.

### 3. Limitations on Board Seats: Priorities and Tradeoffs

Adding experts without subtracting independents almost unavoidably expands boards.<sup>181</sup> Although it may be possible to increase expertise while maintaining independence and not disturbing existing board priorities, there would still be tradeoffs. For example, some institutional investors have suggested that a board that is too large may not be as effective—thus, increasing board size by adding experts could result in a fragmented and less effective board.<sup>182</sup> Depending on how many risk factors a corporation faces and what kinds of experts it chooses to deal with them, adding experts may push the board past the limit and result in ineffective decision-making.

Another example of potential tradeoffs and priorities involves increasing board diversity through appointing women and minorities to board seats. Though many professions in which domain experts can be found are still structurally exclusive of minorities and women,<sup>183</sup> increasing expertise need not impair board diversity efforts. Corporations can and should retain diversity as a valuable criterion when composing their boards and committees and when selecting experts.<sup>184</sup>

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181. Of course, corporations could increase the expertise on their boards by replacing directors or appointing new directors to seats lost to attrition with a renewed focus on expertise.

182. See Bainbridge, *supra* note 27, at 44.

183. See Deborah Hurley, *Improving Cybersecurity: The Diversity Imperative*, FORBES (May 7, 2017, 3:01 PM), <https://www.forbes.com/sites/ciocentral/2017/05/07/improving-cybersecurity-the-diversity-imperative> [<https://perma.cc/H3RV-8TC2>] (discussing the lack of diversity within the cybersecurity industry).

184. For example, imagine a Silicon Valley tech startup with a “frat house” corporate culture that is shopping itself for venture capital investment. Imagine if, at this early stage, a venture capital firm placed a director on the startup’s board with expertise in this area. Could some corporate culture problems be solved even before the company goes public? Or if it never does? See, e.g., Mike Isaac, *Inside Uber’s Aggressive and Unrestrained Workplace Culture*, N.Y. TIMES (Feb. 22, 2017), <https://www.nytimes.com/2017/02/22/technology/uber-workplace-culture.html> [<https://perma.cc/58CS-FFAP>] (describing a culture of sexual

#### 4. The Roadblock: A Delaware Court Once (Arguably) Held an Expert to a Higher Standard

If corporations do increase their demand for expert directors, an important question emerges: Would the hypothetical expert director face a greater, equal, or lesser chance of individual liability in a shareholder suit when something goes awry?<sup>185</sup> There is some evidence that the trend toward increased independence and the liabilities for directors associated with various legal reforms have shrunk the pool of eligible director candidates due to a fear of liability for what amounts to a part-time job.<sup>186</sup> This could be an even more acute problem for experts.

In *In re Emerging Communications Shareholder Derivative Litigation*,<sup>187</sup> a Delaware Court of Chancery held that a financial expert should have known that a proposed share price in a going-private transaction was insufficient *because* of his expertise.<sup>188</sup> Indeed, other nonexpert directors escaped liability.<sup>189</sup> The *Emerging Communications* decision appears to be the only case of its kind, but it is enough to raise questions for a potential expert contemplating her recruitment to a board. Nonetheless, it appeared that the court's reasoning was premised on *both* the expert's lack of independence and his failure to apply his expertise.<sup>190</sup> Undoubtedly, the risk of being held to a higher standard than fellow directors could make an expert leery of sitting on a board, especially if she does so with the express understanding that she has been appointed to the board in part because of her expertise. On the other hand, no expert should

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harassment and other dysfunctions and Uber's later decision to appoint Arianna Huffington and Eric Holder, Jr., as directors to help deal with these problems).

185. Similar to the discussion above about the procedural difficulties associated with suing and winning against a corporate director, *see supra* Section I.B.2, it is likewise rare that any individual director pays out-of-pocket for a judgment or settlement of a corporate law claim. *See* Bernard Black et al., *Outside Director Liability*, 58 STAN. L. REV. 1055, 1138–39 (2006) (providing results of an empirical analysis of out-of-pocket payments—and the lack thereof—for corporate and securities claims).

186. *See* Bainbridge & Henderson, *supra* note 1, at 1064–65 (discussing “part time” nature of directorship); *see also*. Black et al., *supra* note 185 at 1138–39; Rodrigues, *supra* note 3, at 458.

187. No. Civ.A. 16415, 2004 WL 1305745 (Del. Ch. May 3, 2004).

188. *Id.* at \*40.

189. *Id.* at \*41–43.

190. *See id.* at \*40 (focusing on whether the director's mindset was loyalty to a fellow director who personally benefitted from transaction).

expect to sit on a board without understanding that she will be subject to the same fiduciary duties as any other director, generalist or otherwise. In sum, it is not clear that *Emerging Communications* clearly establishes higher standards of loyalty or care for expert directors, but any additional risk likely is not hidden from potential expert directors and existing directors who might wish to appoint them.

### III. FROM AUDIT COMMITTEE FINANCIAL EXPERTS TO CYBERSECURITY DIRECTORS(?)

This Article's framework for expert directors, if it is a good one, should fit past instances where firms have appointed expert directors and should contribute predictive power for some future instances. This Part shows how the criteria proposed in this Article provide a generalizable explanation for Sarbanes-Oxley's "audit committee financial expert" (ACFE) provision. In short, accounting and auditing represent high information-cost problems comprised of difficult-to-quantify risks and technical complexity worthy of an expert. While Congress could have had several reasons to nudge corporations to appoint financial experts to their auditing committees, this Article's information costs-risk-expertise explanation seems to fit as a general matter. This Part then looks forward to the possibility that firms may appoint cybersecurity experts to boards.<sup>191</sup>

#### A. *Looking Back—The Audit Committee Financial Expert*

The accounting scandals of the early 2000s led Congress to pass the Sarbanes-Oxley Act of 2002,<sup>192</sup> which expanded the SEC's regulatory power over corporate governance.<sup>193</sup> Among its menu of reforms, Sarbanes-Oxley required independent audit committees and disclosure of whether or not the audit committee contained any "financial experts."<sup>194</sup> This combination of independence and expertise, instead of just one or the other, makes the ACFE provisions a useful example for an effort to

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191. See S. 536, 115th Cong. (2017).

192. Sarbanes-Oxley Act of 2002, Pub. L. 107-204 § 407, 116 Stat. 745 (codified at 15 U.S.C. § 7265 (2012)).

193. Romano, *supra* note 95, at 1523.

194. 15 U.S.C. § 7265 (2012). Also referred to as the "audit committee financial expert" or ACFE.



develop an explanation of when and why corporations should appoint expert directors.

### 1. The Audit Committee Under Sarbanes-Oxley

Audit committees have been quite popular since at least 1978, when the New York Stock Exchange first required its listed companies to have them.<sup>195</sup> Sarbanes-Oxley formalized the committee by requiring many public company boards to have them or requiring a board as a whole to exercise an audit committee's functions.<sup>196</sup> Put in terms of this Article's view of expert directors: Congress, by specific legislation, mandated that auditing and financial reporting be monitored and managed at the board level by directors.

The audit committee is required to be majority-independent<sup>197</sup> and is charged with several functions: hiring and managing the external auditor, monitoring the managers' management of the internal audit function, and monitoring internal controls.<sup>198</sup> This formalization of the committee also includes the expertise requirement.<sup>199</sup> The inclusion of expertise in Sarbanes-Oxley and its implementation illustrate both the difficult-to-quantify risk and technical expertise aspects presented in this Article.

### 2. Expert Provision, SEC Implementation, Empirical Work

Sarbanes-Oxley's section 407 directs the SEC to issue rules defining "financial expert" and requiring covered corporations to disclose whether they have any financial experts on their audit committees.<sup>200</sup> The Act itself set forth a short list of "[c]onsiderations" that the SEC was to use when crafting its

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195. See Order Approving NYSE Proposed Rule Change, 42 Fed. Reg. 14,793 (Mar. 16, 1977); see also NYSE, *supra* note 35, § 303A.06. The SEC has expressed support for such committees in some form or another going back to the 1940s. See Standards Relating to Listed Company Audit Committees, 68 Fed. Reg. 18,788 (Apr. 16, 2003).

196. 15 U.S.C. § 7201(3)(A)–(B).

197. *Id.* § 78j-1(m)(3).

198. See *id.* §§ 78j-1(m)(2) (hiring external auditor), 7241(5) (describing required reporting to the audit committee on internal controls).

199. *Id.* § 7265.

200. *Id.*

rules; these included education, experience in certain jobs, and substantive experience dealing with accounting, auditing, and preparing financial statements.<sup>201</sup> Congress did not provide any further explanation as to why it wanted firms to have financial experts on audit committees.

The SEC did not provide much explanation for why an expert could be useful, either. Its implementing rules tracked the statute closely. It carried over the language regarding education, experience in certain jobs and closely related jobs, and an understanding of accounting, auditing, and financial reporting.<sup>202</sup> Notably, though, it expanded the meaning of “financial expert” to include persons who possess “experience actively supervising one or more persons engaged in” preparing, auditing, analyzing or evaluating financial statements.<sup>203</sup> This means that someone who served as the CEO of a similarly sized corporation could be a “financial expert” merely by “actively supervising” others in performing these duties.<sup>204</sup>

The rules gave rise to a good bit of empirical literature, which, like the literature on the impact of independent directors, seemed to diverge. Some studies tended to show that AFCEs reduced misstatements, while others found little effect.<sup>205</sup> The empirical literature shows a stronger positive impact<sup>206</sup> from appointing expert directors than from appointing independent directors, though that could be a product of self-selection<sup>207</sup> or other complicating factors. Whether or not the empirical results show that expert directors provide value to corporations, the ACFE provision of Sarbanes-Oxley and its implementing regulations suggest that there is a high information-cost problem arising from (1) difficult-to-quantify risks related to financial misstatements, weak internal auditing, and poor internal controls; and (2) a necessity for technical exper-

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201. *Id.* § 7265(b).

202. 17 C.F.R. § 229.407(d)(5) (2018).

203. *Id.*

204. *Id.*

205. A meta-analysis of ninety studies of the effects of audit committee financial experts on earnings concluded that there was an overall “positive relationship” between expertise and earnings, though the authors did maintain that the studies themselves were “mixed.” Bilal et al., *supra* note 161, at 268.

206. *Id.*

207. Romano, *supra* note 95, at 1532 n.30 (explaining that a high-performing firm with good managers might pick better directors anyway, thus suggesting causality for the high performance flowed from good management generally, not the expert or independent directors).

tise in accounting, auditing, and financial reporting to evaluate managers' approaches to these risks and to manage the aspects of the audit function that the committee itself performs.

### 3. Financial Misstatements as Expensive Information, Difficult-to-Quantify Risks, and Matters That Require Accounting and Auditing Expertise

Sarbanes-Oxley and the SEC *require* independent audit committees,<sup>208</sup> but only require *disclosure* of the presence or absence of expert directors.<sup>209</sup> If Congress and the SEC mandate independence to resolve conflicts, then what might have motivated adding disclosure of expertise in the auditing context?

Information is key to board decision-making, and so the accounting and financial reporting systems are best thought of as information about the information. Information about the reliability of accounting systems, the possibility or probability of a manager cooking the books, and similar other matters is costly for directors to acquire—in fact, it may be too costly for a generalist director to acquire on her own. An expert director can mitigate that cost because she already possesses valuable knowledge and information about how these accounting systems should work, what book-cooking would actually look like, and how to design systems that prevent fraud and mitigate risk.

Risks of financial misstatements come from many of sources. Of course, there is always the risk of a catastrophic event like a massive fraud.<sup>210</sup> But there is also the risk of less impactful events such as embezzlement, smaller-time frauds, poor controls, or a material accumulation of many small accounting errors. Regardless of genesis, losses due to financial misstatements have the potential to damage the continued viability of a corporation.

Nonetheless, accounting, auditing, and financial reporting risks remain, for the most part, significant operational risks

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208. 15 U.S.C. § 78j-1(m)(3) (2012).

209. *Id.* § 7265.

210. For example, consider Enron. As noted above, misstatements from mistaken data entry and similar problems are risks, but typically not catastrophic ones. See Krawiec, *supra* note 121, at 134–35; *supra* Section II.B.2.

that do not correspond closely with profits and losses.<sup>211</sup> Furthermore, firms still earn profit from taking market and—in some cases—credit risks, but not from increasing operational risks related to financial reporting.<sup>212</sup> Worse, the operational risk component of a financial reporting system can impair information gathering and management of market and credit risks as well.<sup>213</sup>

Given the complexity, contexts, and sources of financial reporting risk, directors do not have an easy way to measure and review it, nor do they have a sure way of incentivizing managers to deal with it.<sup>214</sup> While Congress and the SEC did not present specific reasoning about the nature of financial reporting risk and the difficulty of quantifying that risk, this Article's framework explains why Congress might have wanted to ensure that the board was taking a more active role in the audit and financial reporting context.

Accounting has long been considered a professional domain, while auditing and financial reporting are specialized functions within that domain. Accountants typically maintain a specific professional certification,<sup>215</sup> hold masters or doctoral degrees in accounting,<sup>216</sup> and work for public accounting firms or in accounting-specific roles within organizations.<sup>217</sup> Monitoring and managing the many risks associated with financial reporting is quite difficult even for someone possessing education or experience in accounting, auditing, and financial reporting. General executive management experience is certainly helpful for monitoring some aspects of financial reporting, but it is

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211. See, e.g., Krawiec, *supra* note 121, at 136.

212. See *supra* Section II.B.2.

213. See Anabtawi & Schwarcz, *supra* note 117, at 1359 (discussing the impact of Enron's misunderstanding of tail risk events on its overall risk management).

214. See *supra* Section II.B.2.

215. That is, the Certified Public Accountant (CPA) License. See *CPA Licensure*, AICPA, <https://www.aicpa.org/becomeacpa/licensure.html> (last visited Jan. 21, 2019) [<https://perma.cc/6B5K-HWBS>].

216. Many schools offer Masters degrees in accounting because the CPA exam requires more postsecondary credit hours than most undergraduate degrees. See *150 Hour Requirement for Obtaining a CPA License*, AICPA, <https://www.aicpa.org/becomeacpa/licensure/requirements.html> (last visited Jan. 21, 2019) [<https://perma.cc/352A-Y8HT>]. Academic accountants usually earn PhDs in accounting. See *generally PhD in Accounting*, GEORGIA TECH: SCHELLER C. BUS., <https://www.scheller.gatech.edu/degree-programs/phd/phd-concentrations/phd-accounting.html> (last visited Jan. 21, 2019) [<https://perma.cc/JC8T-9UVJ>].

217. See, for example, the list of job titles in Rule 229.407. 15 C.F.R. § 229.407 (2018).

probably insufficient.<sup>218</sup> For a committee tasked with monitoring and managing a system full of complex financial reporting judgments, not to mention ferreting out a massive, Enron-style fraud, Congress concluded that expertise should go along with independence.

In sum, the ACFE fits this Article's proposed view fairly well: financial reporting involves an informationally intense, broad, and complex class of operational risks that are difficult to quantify and sometimes catastrophic. To adequately monitor managers' handling of these risks, and to adequately manage the risks assigned to them, directors need a depth of technical knowledge and information within the field of accounting that general expertise in business does not provide. Indeed, a generalist would have to incur much greater costs to become an adequate monitor of this domain, whereas an expert director has already incurred that cost.

### *B. Looking Forward—The Cybersecurity Director*

The previous Section looked at a past example of where the law affirmatively nudged corporations to appoint expert directors, while this Section looks at a potential future one. This Section discusses cybersecurity. "Cybersecurity" is a broad term that encompasses many things, but this Section focuses on the aspect of cybersecurity that is the most relevant to the most corporations: protecting the "personally identifiable information"<sup>219</sup> (PII) that belongs to customers and employees

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218. For example, the mandatory bookkeeper vacations discussed above. See *supra* Section II.B.2.

219. "Personally identifiable information" or "PII" is a common and broad term meaning "any data that can be used to identify a specific individual." Roger A. Grimes, *What Is Personally Identifiable Information (PII)? How to Protect It Under GDPR*, CSO (Feb. 7, 2018, 3:18 AM), <https://www.csoonline.com/article/3215864/privacy/how-to-protect-personally-identifiable-information-pii-under-gdpr.html> [<https://perma.cc/V3R9-CNZ4>]. Its meaning has often evaded useful definition. See Patrick Schwartz & Daniel Solove, *The PII Problem: Privacy and a New Concept of Personally Identifiable Information*, 86 N.Y.U. L. REV. 1814, 1828–36 (2011). There is some variation in the meaning and scope of the term, but for data breach purposes it usually involves enough information to harm a person financially. For example, many state data breach notification laws use merely "personal information" and define it to include multiple pieces of information together. See, e.g., COLO. REV. STAT. § 6-1-716(1)(d)(I) (West 2018) (defining "personal information" to include a person's "first name or first initial and last name in combination with" a social security number, driver's license number, or credit card number, among other identifying details).

but that is stored on computer systems belonging to various businesses. This Section first provides a basic overview of the technological and legal issues at stake and how those technological and legal issues drive information costs, and then turns to how expert directors might play into the way that boards are dealing with these problems.

### 1. Anatomy of a Data Breach or a Hack

A full categorization of the different kinds of data breaches is not necessary to understand their impact, but a brief look at a few archetypes may be helpful in understanding how they usually unfold. While not exhaustive, the most common data-breach archetypes can be categorized roughly as: (1) the careless insider, (2) the inside job, (3) the easy hack, and (4) the hard hack. Notably, any of these data breaches can occur due to carelessness or malice by employees, and, in fact, many data breaches are traceable to some insider's carelessness or failure to adhere to policies, rather than attributable entirely to malicious outsider hacking.<sup>220</sup>

The careless insider is an employee of the company who accidentally allows personal data of some kind to fall into the wrong hands by not securing some physical device<sup>221</sup> or accidentally sending PII to an unauthorized person via some digital communication channel. The malicious insider is an authorized internal user or contractor who abuses her access to a company's computer system to steal sensitive data<sup>222</sup> or open the door to hackers. The easy hack occurs when an external hacker preys upon an insider's lack of technical knowledge, negligence, or susceptibility to trickery to gain unauthorized access to a company's computer system.<sup>223</sup> The hard hack oc-

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220. VERIZON, 2018 DATA BREACH INVESTIGATIONS REPORT 5–9 (2018), [https://enterprise.verizon.com/resources/reports/DBIR\\_2018\\_Report\\_execsummary.pdf](https://enterprise.verizon.com/resources/reports/DBIR_2018_Report_execsummary.pdf) (last visited Mar. 27, 2019) [<https://perma.cc/7CEH-CWK3>].

221. Afrah Fathima & Badiuddin Ahmed, *Making Data Breach Prevention a Matter of Policy in Corporate Governance*, 2 INT'L J. SCI. ENG. & TECH. 1, 4 (2013) ("Many, if not most of [a set of analyzed data breaches] resulted from laptops, portable hard drives, thumb drives or some other piece of computer equipment being stolen or lost.").

222. PONEMON INST., 2018 COST OF DATA BREACH STUDY 9 (2018).

223. The best example of this is called "phishing." See *Phishing*, U.S. FED. TRADE COMM'N (July 2017), <https://www.consumer.ftc.gov/articles/0003-phishing> [<https://perma.cc/5K69-CMBR>]. Phishing is where a would-be hacker sends users an email attempting to trick them into entering their login credentials. The

curs when an external hacker uses a sophisticated hacking method to “break into” the company’s computer system.<sup>224</sup> Some data breaches involve a combination of these archetypes. For example, the massive data breach suffered by retailer Target Corporation occurred because a vendor employee fell victim to a phishing scheme, which allowed the hackers to load malware onto the vendor’s and, ultimately, Target’s computer systems.<sup>225</sup>

The aims of intentional data breaching or stealing negligently unprotected data range from stealing information that can later be used to steal money, to retaliating for international political grievances.<sup>226</sup> Regardless of a breach’s purpose, it creates huge costs and complications for the breached company.

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hacker then uses the credentials to access the system, look for data, and steal it. *Id.*

224. For example, the Sony Pictures Entertainment data breach apparently was conducted using malware. See Kurt Baumgartner, *Sony/Destover: Mystery North Korean Actor’s Destructive and Past Network Activity*, SECURELIST (Dec. 4, 2014), <https://securelist.com/destover/67985/> [<https://perma.cc/4V5X-VMZJ>]. In contrast to just stealing someone’s password by trickery, most sophisticated hacking methods use computer programs (often referred to as malware, or, in common parlance, viruses) to “break into” password-protected databases and steal or destroy information. See generally *Malware*, PC: ENCYCLOPEDIA, <https://www.pcmag.com/encyclopedia/term/46552/malware> (last visited Jan. 21, 2019) [<https://perma.cc/3SSK-4472>]. Among the most legendary hacking stories involves the use of an unsecured, networked fish tank thermometer. See Karl Bode, *A Casino Was Hacked Thanks to the Internet of Broken Things & a Fish Tank Thermometer*, TECHDIRT (Apr. 16, 2018), <https://www.techdirt.com/articles/20180416/10152039639/casino-was-hacked-thanks-to-internet-broken-things-fish-tank-thermometer.shtml> [<https://perma.cc/TE2B-XNMW>]. The hackers simply logged on to the unsecured thermometer, navigated from there to the database containing high rollers’ financial information, copied it, and sent it out to themselves through the thermometer. *Id.*

225. See Brian Krebs, *Email Attack on Vendor Set up Breach at Target*, KREBS ON SECURITY (Feb. 12, 2014), <https://krebsonsecurity.com/2014/02/email-attack-on-vendor-set-up-breach-at-target/> [[perma.cc/NL48-FWM6](https://perma.cc/NL48-FWM6)] (describing phishing email hackers sent to vendor employees); Brian Krebs, *Target Hackers Broke in via HVAC Company*, KREBS ON SECURITY (Feb. 5, 2014), <https://krebsonsecurity.com/2014/02/target-hackers-broke-in-via-hvac-company/> [<https://perma.cc/4QYY-6NY7>] (describing malware hackers used to steal credit card information).

226. See, e.g., Nicole Perlroth & Clifford Krauss, *A Cyberattack in Saudi Arabia Had a Deadly Goal. Experts Fear Another Try.*, N.Y. TIMES (Mar. 15, 2018), <https://www.nytimes.com/2018/03/15/technology/saudi-arabia-hacks-cyber-attacks.html> [<https://perma.cc/6WNL-NLPL>] (discussing the Aramco breach of 2012 as potentially committed by Iran or others who opposed Saudi Arabian foreign policy).

## 2. The Current Legal Landscape

This Section provides a cursory overview of the extant legal regimes for data privacy and information security. This overview is important for understanding the magnitude of the problems that cybersecurity presents to corporations and the reasons that boards are so concerned with it. It also sheds light on the kinds of risks and complexities that create high information costs for boards. The complexity of the relevant legal regimes worldwide, the uncertainty of the law in the United States, and the hefty obligations imposed by laws in the European Union all illustrate the risks associated with the realities of cybersecurity risks. The primary methods of legal regulation are breach notification statutes, actions by the Federal Trade Commission (FTC) and state attorneys general under their “unfair and deceptive acts and practices” authority, tort suits, securities disclosure requirements, and (doubtfully) shareholder derivative actions.

### *a. Data Breach Notification Statutes*

Typically, data breach statutes require businesses to disclose to consumers, within a certain time period, if an unauthorized person accessed consumers’ personal data through a breach of the company’s computer system.<sup>227</sup> As of the time of this Article’s publication, all fifty states have such laws.<sup>228</sup> Scholars and other commentators have raised valuable questions about whether notification and disclosure is sufficient and whether these legal regimes have been effective.<sup>229</sup>

### *b. Consumer Protection Regulatory Frameworks*

Professors Woodrow Hartzog and Daniel J. Solove provide the most thorough account of federal regulation in the cybersecurity space.<sup>230</sup> Professor Gus Hurwitz, citing Hartzog and

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227. See, e.g., CAL. CIV. CODE § 1798.82(a) (West 2017).

228. *Security Breach Notification Laws*, NAT’L CONF. ST. LEGISLATURES (Sept. 29, 2018), <http://www.ncsl.org/research/telecommunications-and-information-technology/security-breach-notification-laws.aspx> [https://perma.cc/6JFZ-CZ4F].

229. E.g., Daniel J. Solove & Danielle Keats Citron, *Risk and Anxiety: A Theory of Data Breach Harms*, 96 TEX. L. REV. 737, 781 (2018).

230. See Woodrow Hartzog & Daniel J. Solove, *The FTC and the New Common Law of Privacy*, 114 COLUM. L. REV. 583, 598, 608–10 (2014) (tracing the roots of



Solove, provides a helpfully brief overview of the history of the FTC's involvement with cybersecurity under its far-reaching "unfair and deceptive acts and practices" authority and "unfair methods of competition" authority.<sup>231</sup> Because there is neither a unifying federal law on cybersecurity nor a relevant regulatory agency, the FTC has asserted itself and emerged as the de facto regulator of cybersecurity in the United States.<sup>232</sup> It has done this by bringing administrative actions against companies for failures of their data breach policies and for failures to adequately manage their information security.<sup>233</sup>

As Professors Hartzog, Solove, and Hurwitz explain, the FTC's approach has been adjudicatory—it has behaved a lot like a traditional common law court in its efforts to develop a jurisprudence of data privacy and information security.<sup>234</sup> While Hartzog and Solove welcome the FTC's stepping into the breach (so to speak), Professor Hurwitz argues that the FTC's exercise of authority lacks justification<sup>235</sup> and has left corporations (and, of course, their boards) without clear courses of action that they can follow to avoid being sued by the FTC.<sup>236</sup> As discussed more thoroughly below, this layer of legal uncertainty suggests strongly that cybersecurity represents a difficult-to-quantify and potentially catastrophic risk.<sup>237</sup>

### *c. Corporate and Securities Law on Data Breaches*

Multiple SEC commissioners have made public statements about cybersecurity governance.<sup>238</sup> In 2018, the SEC issued its

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the FTC's authority to regulate information security and describing a typical FTC enforcement action); see also Justin (Gus) Hurwitz, *Data Security and the FTC's UnCommon Law*, 101 IOWA L. REV. 955 (2016).

231. *Id.* at 967–72.

232. See Hartzog & Solove, *supra* note 230, at 598; Hurwitz, *supra* note 230, at 957.

233. See Hartzog & Solove, *supra* note 230, at 599.

234. See *id.* at 606–07; Hurwitz, *supra* note 230, at 963–64.

235. See Hartzog & Solove, *supra* note 230, at 590; Hurwitz, *supra* note 230, at 1018.

236. As Professor Hurwitz notes, being sued by the FTC usually results in a consent decree requiring years of auditing and monitoring according to its evolving understanding of data privacy and information security practices. See Hurwitz, *supra* note 230, at 971–72.

237. See *infra* Section II.B.2.

238. Robert Jackson, Jr., Commissioner, SEC, Statement to Tulane Corporate Law Institute, Corporate Governance: On the Front Lines of America's Cyber War (Mar. 15, 2018), <https://www.sec.gov/news/speech/speech-jackson-cybersecurity->

first guidance on its expectations for listed companies' reporting and disclosure of data breaches and privacy practices.<sup>239</sup> Also in 2018, it punished Yahoo (by its corporate name, Altaba) for its failure to disclose its data breach until several SEC reporting periods afterward.<sup>240</sup>

All major derivative actions against officers and directors for losses involved with data breaches have failed.<sup>241</sup> Notable examples include derivative actions against Target and Home Depot arising from data breaches. In both cases, federal district courts applying Delaware law dismissed the claims on procedural grounds.<sup>242</sup> Nonetheless, the risk of *Caremark*<sup>243</sup> liability remains.

#### *d. Privacy Frameworks Outside the U.S.*

As Professors Hartzog and Solove noted, the United States' approach to cybersecurity is industry-specific, sectoral, and limited to certain classes of firms—as it is with many forms of business regulation.<sup>244</sup> Data protection is, to put it mildly, quite different elsewhere in the world.<sup>245</sup> The European Union

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2018-03-15 [<https://perma.cc/3UHL-YTQC>]; Kara M. Stein, Commissioner, SEC, Statement on Commission Statement and Guidance on Public Company Cybersecurity Disclosures (Feb. 21, 2018), <https://www.sec.gov/news/public-statement/statement-stein-2018-02-21> [<https://perma.cc/4P8U-MW3Q>].

239. See Commission Statement and Guidance on Public Company Cybersecurity Disclosures, 83 Fed. Reg. 8,166 (Feb. 26, 2018).

240. Press Release, Altaba, Formerly Known as Yahoo!, Charged with Failing to Disclose Massive Cybersecurity Breach; Agrees to Pay \$35 Million, SEC 2018-71 (Apr. 24, 2018), <https://www.sec.gov/news/press-release/2018-71> [<https://perma.cc/F8VM-WXWR>].

241. See, e.g., Kevin LaCroix, *Home Depot Data Breach Derivative Lawsuit Dismissed*, D & O DIARY (Dec. 1, 2016), <https://www.dandodiary.com/2016/12/articles/cyber-liability/home-depot-data-breach-derivative-lawsuit-dismissed/> [<https://perma.cc/ST9C-2YC3>] (discussing notable dismissals).

242. Though Home Depot later settled. See Kevin LaCroix, *Home Depot Settles Data Breach-Related Derivative Lawsuit*, D & O DIARY (May 1, 2017), <https://www.dandodiary.com/2017/05/articles/cyber-liability/home-depot-settles-data-breach-related-derivative-lawsuit/> [<https://perma.cc/LDH6-YFZG>].

243. *In re Caremark Inc.*, 698 A.2d 959 (Del. Ch. 1996).

244. Hartzog & Solove, *supra* note 230, at 586 n.3 (describing comparisons of fragmented U.S. law to comprehensive European Union regime).

245. Influential privacy consultant and expert Robert Gellman provided a useful history of data privacy in Europe and elsewhere in a 2003 article calling for more comprehensive data privacy regulation in the United States. See Robert Gellman, *A Better Way to Approach Privacy Policy in the United States: Establish a Non-Regulatory Privacy Protection Board*, 54 HASTINGS L.J. 1183, 1185–90 (2003).

is considered the global leader, having adopted the Data Protection Directive in 1995,<sup>246</sup> an elegant regulatory regime that applies to public and private entities that collect, store, and share personal information. In 2018, the General Data Protection Regulation (GDPR) superseded the Data Protection Directive, updating it for new technologies, expanding its scope, and imposing higher burdens on regulated entities.<sup>247</sup> A full discussion of the EU data protection framework is beyond the scope of this Article, but it should be noted that large public companies—the ones most likely to appoint expert directors—often operate on a global scale.<sup>248</sup> Their global dealings undoubtedly bring them into contact with these more extensive non-domestic regulatory frameworks.

*e. Tort Suits*

Professors Solove and Danielle Citron have illustrated the limitations of the tort system with respect to cybersecurity.<sup>249</sup> Privacy law generally is weaker in the United States than the European Union,<sup>250</sup> and the common law tort system is limited in the extent to which it recognizes privacy as a legal right. Therefore, to be successful, a plaintiff in a data breach case must provide greater evidence of causation and damages than victims of data breaches can typically show.<sup>251</sup>

*f. Market Demand for Data Privacy and Information Security Governance*

Earlier, this Article emphasized the importance of private ordering, market development of norms, and the complex ex-

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246. See Council Directive 95/46/EC, 1995 O.J. (L 281).

247. See Commission Regulation 2016/679, art. 99, 2016 O.J. (L 119) 1.

248. For example, Facebook's 2018 Annual Report references the GDPR by name and discusses its impact on Facebook's business. Facebook, Inc., Annual Report 16 (Form 10-K) (Feb. 2, 2018).

249. Solove & Citron, *supra* note 229, at 747–48 (summarizing discussion of the difficulty that plaintiffs face when establishing harm in many data breach cases).

250. See Hartzog & Solove, *supra* note 230, at 586 (describing the “fragmentation” and “hollow standards” in U.S. law in contrast to the “comprehensiveness” of E.U. law, but suggesting that the FTC's growing attention to the matter is narrowing the differences between the two bodies of law).

251. Solove & Citron, *supra* note 229, at 748.

tralegal processes that drive corporate governance.<sup>252</sup> While substantive issues do not always command the kind of investor attention that meta debates like director independence do, cybersecurity joins accounting and auditing as a substantive issue that may become a major part of corporate governance, and it may do so by norm development instead of legal development.<sup>253</sup> Just as all corporations have to manage their book-keeping, accounting, and financial reporting, practically every business firm in existence has some sort of information technology system. While it may reduce employee productivity to have an outdated file management system or irritate customers to have a slow point-of-sale system, cybersecurity is much bigger than information technology infrastructure alone. Furthermore, even businesses that are not actively involved in collecting, sharing, or otherwise making use of personal data still tend to collect it—usually in the form of records about their employees.

Data breaches, even ones that are not massive, are quite costly. The Ponemon Institute, which publishes a yearly report on the costs of data breaches, estimated that the average worldwide cost of a data breach in 2018 was \$3,860,000.<sup>254</sup> The major cost components of a data breach include everything from the costs of discovering the full extent of the breach to the legal and consulting fees associated with legal and regulatory compliance in responding to the breach.<sup>255</sup> Furthermore, reputational damage can drive away customers and impair business prospects wholly unrelated to information technology.<sup>256</sup> Though empirical research into stock performance following data breaches is limited,<sup>257</sup> the costs associated with data

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252. See *supra* Section I.B.2 (discussing the market demand for independent directors).

253. See Jackson, *supra* note 238.

254. See PONEMON INST., *supra* note 222, at 3. In 2017, the worldwide cost per data breach was \$3,620,000. PONEMON INST., 2017 COST OF DATA BREACH STUDY 1 (2017). Notably, costs per data breach remain lower than 2016, where the total was approximately \$4,000,000. *Id.*

255. PONEMON INST., *supra* note 222, at 22–30.

256. ALEXSANDER PAVLOVIC, CISCO SYS., INC., YOUR TIME IS NOW: WHAT CAN WE LOSE NOT IMPLEMENTING PROPER SECURITY IN OUR IT ENVIRONMENT? 20 (2017) (describing reputational and customer retention as the third most impacted business area following operations and finance).

257. Georgios Spanos & Lefteris Angelis, *The Impact of Information Security Events to the Stock Market: A Systematic Literature Review*, 58 COMPUTERS & SEC. 216 (2016) (collecting studies).

breaches are certainly significant enough to impair earnings.<sup>258</sup> To be sure, despite their actual book costs, data breaches may not actually end up being extensively costly to corporate performance. FTC actions for data breaches and privacy-related shortcomings typically result in consent agreements that require expenditure of significant resources for future privacy protections, audits, and compliance supervision.<sup>259</sup> For all of these reasons, incentives exist for corporations to improve their processes for dealing with these issues, particularly in terms of preventing and responding to breaches. And there is substantial evidence that corporations already are responding to these incentives—sometimes even by appointing cybersecurity expert directors voluntarily.<sup>260</sup>

### C. *The Cybersecurity Expert Director*

This Article proposes that cybersecurity presents the sort of problem for which corporations should appoint expert directors, whether at the behest of regulators, legislatures, or investors. This Section evaluates whether cybersecurity represents a difficult-to-quantify and potentially catastrophic risk and whether domain expertise is necessary to monitor managers' handling of the risk. It concludes in the affirmative.

#### 1. Information Costs

Cybersecurity is a space where boards are beginning to recognize that they lack relevant knowledge, information, and skills. As more than one SEC commissioner has said, cybersecurity is a major governance issue and deserves appropriate treatment at the board level.<sup>261</sup> Individual directors, then, face a new information cost: obtaining enough knowledge and background in the domain of cybersecurity to make informed and intelligent decisions on these issues. One way to reduce this information cost would be to appoint someone to the board who

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258. See HOME DEPOT, INC., ANNUAL REPORT 10 (Form 10-K) (Mar. 21, 2018) (describing the costs incurred in the 2014 data breach).

259. Hurwitz, *supra* note 230, at 971–72.

260. See DELOITTE, *supra* note 85, at 50–52 (reporting survey results on boards' monitoring of cybersecurity issues and illustrating that some survey respondents have appointed directors with cybersecurity expertise or skills).

261. See Jackson, *supra* note 238; Stein, *supra* note 238.

has already made that domain-specific investment in information: a cybersecurity expert director.

## 2. Risks

Cybersecurity risks are almost certainly operational risks—by process of elimination, the risks associated with a hack, breach, or poor information control are not market or credit risks.<sup>262</sup> Although the cost of the average aggregate data breach is a relevant data point,<sup>263</sup> and although the FTC's public consent decrees hint at the cost to corporations of complying with FTC enforcement priorities,<sup>264</sup> cybersecurity risk is among those operational risks for which quantification is not particularly easy.<sup>265</sup> Furthermore, a massive hack, breach, or malware incident might properly be considered a tail risk.<sup>266</sup> In sum, cybersecurity risks tend to fit within this Article's framework of difficult-to-quantify and potentially catastrophic risks.

Cybersecurity risk is a patchwork of several types of operational risk. The above-discussed cybersecurity regulatory frameworks, some of them with more teeth<sup>267</sup> than others,<sup>268</sup> create multiple fronts for liability, mitigation, or restoration costs after breach or misuse of personal information. Furthermore, while the extent of potential reputational losses is not completely clear, companies that have been hacked or breach usually suffer no less than several bouts of really bad publicity.<sup>269</sup> Finally, decisions about how to deploy information technology to improve business processes must always be balanced against cybersecurity risk.<sup>270</sup> These risks remain difficult to

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262. See *supra* Section II.B.2.

263. *E.g.*, PONEPOM INST., *supra* note 222, at 3.

264. *E.g.*, Hurwitz, *supra* note 230, at 971–72.

265. See Krawiec, *supra* note 121, at 129–30, 138.

266. Though even very large breaches are looking more and more like fat tail risks—that is, that the population of data breaches might not be normally distributed by overall cost. See, *e.g.*, Bainbridge, *supra* note 72, at 971 n.5 (explaining fat-tailed distributions and risks).

267. See, *e.g.*, Commission Regulation 2016/679, 2016 O.J. (L 119) 1.

268. See Hartzog & Solove, *supra* note 230, at 586, 590 (suggesting that the FTC's role as the United States' data security regulator could result in improving the U.S.'s information security law in relation to the more robust EU privacy law).

269. For example, Equifax, Target, and Home Depot faced significant public relations challenges following their breaches.

270. For example, the GDPR proposes a privacy-by-design framework, which can be compared to the accounting decision about how and when to report certain cash receipts or disbursements as revenues or expenses with the knowledge of

quantify and potentially catastrophic. Thus, boards should take an active role in dealing with them, perhaps even in the form of appointing an expert director.

### 3. Expertise

Information technology, computer networks, data privacy, and information security are very much domains of specialized expertise. Universities now have academic departments offering a dizzying array of degrees covering all aspects of computer technology; academic journals devoted to computer science and technology have proliferated; and large corporations that develop, consult on, and implement business information systems are mature and have numerous employees and managers.<sup>271</sup> Large technology companies not only dominate the worlds of the internet and technology, but also are taking on an ever-expanding piece of the public investing marketplace.<sup>272</sup> Many persons with education and experience in technology generally, and security specifically, certainly fit this Article's rough description of a domain expert.<sup>273</sup> Similarly, Professors Hartzog and Solove have noted that the legal and normative frameworks surrounding data privacy and information security (thanks in no small part to the FTC) are now mature enough that a set of best practices is discernible.<sup>274</sup> This suggests a sufficiently deep and broad domain to fit the definition of expertise described here, as well as a pool of individuals who could ably serve as cybersecurity expert directors.

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how they will impact quarterly earnings and stock price. *See, e.g.,* Monica Ursick, *The New Revenue Recognition Standard in Plain English*, AICPA CPA INSIDER (Mar. 28, 2016); Commission Regulation 2016/679, art. 25, 2016 O.J. (L 119).

271. For example, International Business Machines or Cisco Systems, to name just two.

272. Facebook, Apple, Amazon, Netflix, and Google's combined market capitalization is in the trillions. *Facebook Inc. Company Info*, BLOOMBERG, <https://www.bloomberg.com/quote/FB:US> (last visited May 30, 2019) [<https://perma.cc/HZ9V-JS7G>]; *Apple Inc. Company Info*, BLOOMBERG, <https://www.bloomberg.com/quote/AAPL:US> (last visited May 30, 2019) [<https://perma.cc/C3U7-ATHT>]; *Amazon Inc. Company Info*, BLOOMBERG, <https://www.bloomberg.com/quote/AMZN:US> (last visited May 30, 2019) [<https://perma.cc/M4EQ-E228>]; *Netflix Inc. Company Info*, BLOOMBERG, <https://www.bloomberg.com/quote/NFLX:US> (last visited May 30, 2019) [<https://perma.cc/9BMM-59P7>]; *Alphabet Inc Company Info*, BLOOMBERG, <https://www.bloomberg.com/quote/GOOG:US> (last visited May 30, 2019) [<https://perma.cc/4ZZE-2QAN>].

273. *See supra* Section II.B.4.

274. *See* Hartzog & Solove, *supra* note 230, at 586.

#### D. Disclosure Instead?

This Article takes no position on whether corporations at present have an optimal number or correct types of expert directors. Part of the reason for this is the lack of data—there simply is not a lot of available data on director expertise or director characteristics generally.<sup>275</sup> Consequently, requiring expanded disclosure of director expertise and individual expert directors might be a more appropriate solution than, for example, a mandate or nudge towards appointing any particular type of expert.<sup>276</sup> Thus, the more careful solution would be for Congress to amend the Securities Exchange Act of 1934 to require that firms disclose (1) whether they have any expert directors, (2) what qualifications make those directors experts, and (3) how those directors' expertise could contribute to firm value, risk management, or general improvement of substantive decision-making.<sup>277</sup>

The first piece of this disclosure echoes the ACFE requirement from Sarbanes-Oxley.<sup>278</sup> As with the ACFE requirement, this disclosure would show investors whether the corporation has any directors who should be considered experts.<sup>279</sup> Importantly, and similar to the ACFE requirement, actually having an expert would not be required; only disclosure of whether an expert is on the board would be required.

The second piece of the disclosure requirement would look like the skills matrices that some corporations already disclose voluntarily, or, alternatively, they would look similar to general biographical data required under the 2009 revisions to Regulation S-K.<sup>280</sup> This Article, though, would push for more

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275. Cf. Nili, *supra* note 48, at 58–62 (describing limitations on disclosure of how corporations determined their directors to be independent and arguing in favor of more substantial and transparent disclosure).

276. The current disclosure regulation, Section 401(e) of Regulation S-K, requires corporations to disclose the “specific experience, qualifications, attributes or skills that led to the conclusion that the person should serve as a director . . . .” 17 C.F.R. § 229.401(e)(1) (2018).

277. Such a disclosure regulation would take the form of an amendment to the Securities Act of 1934 and likely involve some rulemaking by the SEC, such as the “considerations” that Sarbanes-Oxley prescribed for the ACFE. See 15 U.S.C. § 7265(b) (2012).

278. *Id.* § 7265(a); 17 C.F.R. § 229.407(d)(5) (2018).

279. 15 U.S.C. § 7265(a); 17 C.F.R. § 229.407(d)(5).

280. 17 C.F.R. § 229.407(c)(2)(v) (requiring disclosure of why the nominating committee believes any given director has certain skills and why they are useful).



and better information than that which Regulation S-K currently requires. Some skills and experience might be domain-specific enough to qualify as expertise in the way this Article has presented it, while other skills and experience might be more general.

As described above, this Article uses a definition of expertise somewhat similar to the one used for ACFEs under Sarbanes-Oxley.<sup>281</sup> It defines a domain expert as someone possessing either: (a) multiple years of direct experience in a domain, (b) an advanced degree and record of research in a domain, or (c) other professional experiences or education that suggest deeper-than-general knowledge of a particular domain.

To illustrate how this potential rule would expand on existing disclosures, a brief look at Microsoft's skills matrix disclosure is helpful. In addition, an analysis of the existing disclosures about two current Microsoft directors shows both the limitations of the existing disclosures and the potential for improved ones. Microsoft's proxy materials include the following skills, expertise, or attributes in its skills matrix: "Financial," "Gender, ethnic, or national diversity," "Global business," "Leadership," "Mergers and acquisitions," "Sales and marketing," and "Technology."<sup>282</sup> The first example director is Terri List-Stoll. It appears from the matrix and her individual biographical squib that she qualifies as an ACFE<sup>283</sup> because her professional career involves serving as a Chief Financial Officer, and she holds substantial positions with the Financial Accounting Foundation and Financial Accounting Standards Board.<sup>284</sup> Ms. List-Stoll's biography at the Financial Accounting Foundation reports that she holds a Certified Public Accountant license.<sup>285</sup> Consequently, Ms. List-Stoll very likely qualifies as a domain expert in accounting and certainly could be described as such in this disclosure.

The second example director, Arne M. Sorenson, is described as an expert in "Mergers and acquisitions."<sup>286</sup> Nonetheless, the only breadcrumb that hints at a domain expertise in mer-

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281. See *supra* Sections II.B.4, III.A.2.

282. Microsoft Corp., Proxy Statement 20 (DEF 14A) (Nov. 28, 2018).

283. And, she is in fact listed as one in the DEF14A. See *id.* at 2.

284. *Id.* at 18.

285. See *Terri L. List-Stoll Board of Trustees*, FIN. ACCT. FOUND., <https://accountingfoundation.org/jsp/Foundation/Page/FAFSectionPage&cid=1176160606467> (last visited Jan. 17, 2019) [<https://perma.cc/44PJ-WDVT>].

286. Microsoft Corp., *supra* note 282, at 20.

gers and acquisitions would be his role as Senior Vice President of Business Development at Marriott International, Inc., from 1996–1998. Mr. Sorenson is also listed as a financial expert on the audit committee (i.e., an ACFE).<sup>287</sup> While it may be that Mr. Sorenson’s educational or professional background in fact make him an expert in mergers and acquisitions or an ACFE, there is little in the disclosure itself to hint at why.<sup>288</sup>

This brief illustration shows the difficulty and complexity involved with deciding which directors are experts, which are not, and where a director’s skills and experience might be sufficient to solve certain kinds of corporate problems in the absence of a level of expertise that would meet this Article’s definition of an expert director. This Article’s proposed disclosure requirement might give investors a better idea of who is an expert, who is not an expert, and what level of expertise certain directors have.

The third piece of information—how directors’ expertise could contribute to improving the board’s fulfillment of its duties—is more searching and, concededly, more subjective. Such a disclosure might be as simple as stating that Ms. List-Stoll’s career in financial accounting makes her more likely than non-experts to spot errors or fraud, manage financial reporting risk, and contribute to important financial reporting decision-making processes.

In sum, this Article’s potential disclosure requirement represents a compromise between legislatively nudging corporations to appoint a specific substantive expert like the ACFE or proposed cybersecurity expert, and refraining from any legislative or regulatory intervention at all.

## CONCLUSION

The settled role of the board as a monitor of managers and mediator of agency costs suggests that empirical and theoretical literature in corporate governance will remain focused on board composition. Independence and the independent board are also here to stay. Even so, the skills, experience, and indi-

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287. *Id.*

288. His biography for Marriott suggests that he was a partner at Latham & Watkins, a large law firm, but does not provide a practice area. See *Arne M. Sorenson*, MARRIOTT INT’L, <http://news.marriott.com/p/arne-m-sorenson/> (last visited Jan. 17, 2019) [https://perma.cc/FA7R-6ZCT].

vidual attributes of directors appear poised to continue growing in importance. This Article's contribution is to illustrate when and why domain expertise—in the form of an expert director—might emerge as a larger part of the discussion of board composition in large public corporations.

The expansion of director attributes into substantive expertise is not just a question of whether expertise is good or valuable. Most agree that it *is* good and valuable, at least in some form or another. Many corporations will have firm-specific reasons to appoint experts from any number of domains, as well as firm-specific constraints and tradeoffs limiting their ability to do so. This Article's aim was to propose an explanation and mechanism in support of its argument that expert directors can increase firm value and reduce the risk of liability.

This Article concludes that the mechanism by which an expert director improves firm value is through bringing knowledge and information to the boardroom that she has already incurred the cost of acquiring, but which generalist directors would have to expend greater time and effort to obtain. That is, an expert director's knowledge, skills, and experience can *reduce* costs associated with gathering, analyzing, and using information. Since appointing new directors may itself prove quite costly for a number of reasons, this Article further winnowed its reasoning through analyzing risk. In the face of all of the risks and problems that emerge in the life of the business, those that evade common quantification techniques for various reasons pose a unique challenge not only to managers dealing with them directly, but also to directors endeavoring to monitor them. Difficult-to-quantify risks, many of them with potentially catastrophic consequences, require directors to exercise their best and most careful judgment and, therefore, allocate more of their limited time and capacity to dealing with them. Similarly, this difficulty in quantification makes it difficult for directors to develop an adequate way to incentivize managers to manage these risks effectively. Some of these risks, such as financial reporting and cybersecurity, simply cannot be monitored effectively if the directors lack the technical knowledge necessary to underpin their judgment.

Boards will continue to navigate substantive business problems, and they need good information to make good decisions. As boards spend more of their time dealing with complex, difficult-to-quantify, and potentially catastrophic risks,

they will need substantial technical knowledge. A domain expert with her own seat in the boardroom provides a useful solution to these problems.

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