Climate Change Compliance

Susan S. Kuo[*] & Benjamin Means[**]

ABSTRACT: Unless corporations prioritize climate change mitigation, efforts to control global warming will fail. Yet, the strategies that have been proposed for enlisting corporations are insufficient to the task. In our era of political polarization, a comprehensive "Green New Deal" to transition the U.S. economy away from fossil fuels is a nonstarter. Nor can we expect corporate risk management or social responsibility to fill the gap; in the absence of external regulation, there are practical limits to how far corporate managers can depart from strategies designed to maximize profits for investors.

This Article contends that corporate compliance offers the most realistic path forward. Scholars have overlooked compliance as a mechanism for addressing climate change because they believe it achieves nothing more than fidelity to existing laws and regulations. This is a mistake. Once neglected as a backwater of corporate governance, the field of compliance has evolved and now involves forward-looking strategic analysis of legal and business risks as well as ethical considerations. A compliance-based approach integrates legal, ethical, and strategic reasons for addressing climate change and provides a robust framework for achieving results.

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[*] Associate Dean for Academic Affairs and Class of 1969 Professor of Law, University of South Carolina School of Law.

[**] Professor of Law and John T. Campbell Chair in Business and Professional Ethics, University of South Carolina School of Law. We are grateful to Bobby Koons, Brent McDonnell, Douglas Moll, Kishanthi Parella, Elizabeth Pollman, and Cynthia Williams for helpful comments on prior drafts. We also would like to thank Amelia Farmer and Andrew Cleary for research assistance and Vanessa McQuinn for administrative support.

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I. INTRODUCTION

Climate change has dramatically increased the frequency and severity of disasters including hurricanes, floods, wildfires, droughts, heatwaves, and even pandemics.[1] Although corporations are artificial legal entities, they are not immune to these hazards. Natural disasters threaten corporations' physical assets, employees, and customers.[2] In a globally connected economy, moreover, climate-change-fueled disasters disrupt supply chains, upend markets, and make certain risks uninsurable, affecting corporations no matter where they are located.[3]

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1. *See* U.S. GLOB. CHANGE RSCH. PROGRAM, CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 1 (Jerry M. Melillo, Terese Richmond & Gary W. Yohe eds., 2014) [hereinafter USGCRP], https://nca2014.globalchange.gov/downloads/low/NCA3_Climate_Change_Impacts_in_the_United%20States_LowRes.pdf [https://perma.cc/F2FF-3ZLZ] ("Precipitation patterns are changing, sea level is rising, the oceans are becoming more acidic, and the frequency and intensity of some extreme weather events are increasing. Many lines of independent evidence demonstrate that the rapid warming of the past half-century is due primarily to human activities."); Cinnamon P. Carlarne, *U.S. Climate Change Law: A Decade of Flux and an Uncertain Future*, 69 AM. U. L. REV. 387, 389 (2019) ("The reality of anthropogenic climate change is no longer subject to scientific debate."); *Coronavirus, Climate Change, and the Environment: A Conversation on COVID-19 with Dr. Aaron Bernstein, Director of Harvard Chan C-CHANGE*, HARV. T.H. CHAN SCH. OF PUB. HEALTH, https://www.hsph.harvard.edu/c-change/subtopics/coronavirus-and-climate-change [https://perma.cc/MP5F-LFPS] (noting climate change "means animals are coming into contact with other animals they normally wouldn't, and that creates an opportunity for pathogens to get into new hosts").

2. *See* Cynthia A. Williams, *Fiduciary Duties and Corporate Climate Responsibility*, 74 VAND. L. REV. 1875, 1885 (2021) ("Exposure to climate risks extends to companies across almost every sector of the U.S. economy . . . .").

3. Disasters impact business organizations of all types and most of the arguments advanced in this Article apply regardless of the form of business association. For ease of reference and because most of the literature focuses on corporations, we will follow that convention here.

Corporations have acknowledged the problem of climate change, but they have not made commitments sufficient to the scope of the challenge.[4] Notably, "[t]o effectively respond to climate change, the U.S. energy system requires a radical transformation—often called 'decarbonization'—from predominantly fossil-fuel-fired energy to almost exclusively carbon-free energy sources."[5] For many corporations, this will be a heavy lift, and wider environmental implications must be considered in the context of an ongoing obligation to maximize shareholder profits.[6]

Unless corporations prioritize climate change mitigation, efforts to control global warming will fail. Yet, the strategies that have been proposed for enlisting corporations are insufficient to the task. In our era of political polarization, a comprehensive "Green New Deal" to transition the U.S. economy away from fossil fuels is a nonstarter.[7] Nor can we expect corporate risk management to fill the gap. Viewed from a risk-management perspective, climate change is just another external risk to hedge against, no different in principle than the risk that interest rates might rise or that an economic downturn could reduce the demand for a corporation's products or services.[8] Alternatively, corporations might agree to reduce their carbon usage as a

4. *See* Steven Mufson, *Top Corporations Have Vowed to Fight Climate Change. Researchers Say Their Plans Fall Short*, WASH. POST (Feb. 6, 2022, 7:09 PM), https://www.washingtonpost.com/climate-environment/2022/02/06/climate-netzero-carbon-emissions [https://perma.cc/7P5T-J5XX].

5. Shelley Welton, *Grasping for Energy Democracy*, 116 MICH. L. REV. 581, 583 (2018).

6. *See* Sarah E. Light, *The Law of the Corporation as Environmental Law*, 71 STAN. L. REV. 137, 204 (2019) (stating that as a matter of risk management, "[e]nvironmental values could be outweighed by the balance of other factors"). At present, notwithstanding efforts to prioritize green energy, "61 percent of the electricity sector and 92 percent of the transportation sector remain powered by fossil fuels." Alexandra B. Klass & Shantal Pai, *The Law of Energy Exports*, 109 CAL. L. REV. 733, 742 (2021).

7. *See* Timothy Gardner, *Republicans Defeat Green New Deal in U.S. Senate Vote Democrats Call a Stunt*, REUTERS (Mar. 26, 2019, 7:05 AM), https://www.reuters.com/article/us-usa-climate-greennewdeal/republicans-defeat-green-new-deal-in-u-s-senate-vote-democrats-call-a-stunt-idUSKCN1R71BZ [https://perma.cc/L7PH-AJ77]. Then-Majority Leader Mitch McConnell described the Green New Deal as "self-inflicted economic ruin that would take a sledgehammer to America's middle class." *Id.* For a pithy explanation of the Green New Deal, see Lisa Friedman, *What Is the Green New Deal? A Climate Proposal, Explained*, N.Y. TIMES (Feb. 21, 2019), https://www.nytimes.com/2019/02/21/climate/green-new-deal-questions-answers.html [https://perma.cc/XXR9-X8TE].

8. *See* Light, *supra* note 6, at 140 (describing traditional view of the distinction between public environmental law and private markets: "[F]irms maximize their value within markets that are designed to promote efficient competition, while the government, through public environmental law, should address any negative externalities associated with market production"); Stavros Gadinis & Amelia Miazad, *Corporate Law and Social Risk*, 73 VAND. L. REV. 1401, 1405 (2020) ("For the last half century, interpreting shareholder primacy as a requirement to maximize profits has remained the reigning credo of the corporate world."). The locus classicus for the argument is Milton Friedman, who argued "there is one and only one social responsibility of business—to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game." Milton Friedman, *A Friedman Doctrine—The Social Responsibility of Business Is to Increase Its Profits*, N.Y. TIMES (Sept. 13, 1970), https://www.nytimes.com/1970/09/13/archives/a-friedman-doctrine-the-social-responsibility-of-business-is-to.html [https://perma.cc/F8MG-6X9U].

matter of corporate social responsibility ("CSR") or to serve environmental, social, and governance ("ESG") goals. However, there are practical limits to how far corporate managers can depart from strategies designed to maximize profits for investors.[9]

This Article argues that climate change is better understood as a compliance issue. Once triggered, compliance obligations go further than standard risk management. Crucially, compliance is mandatory and not beholden to a profit-maximization analysis.[10] Scholars have overlooked compliance as a solution because they believe it achieves nothing more than fidelity to existing laws and regulations.[11] This is a mistake.

In recent years, compliance has gained prominence and power.[12] Indeed, according to one commentator, "the oversight and control of internal corporate affairs . . . has been overtaken by compliance."[13] Far from being a neglected backwater, compliance departments have emerged as a major component of corporate governance.[14] Compliance officers enjoy direct access to CEOs and boards of directors and participate in the formulation of corporate strategy. Notably, compliance now includes forward-looking strategic analysis of legal and business risks as well as ethical considerations.

Compliance provides a stronger framework for battling climate change than risk management. First, whereas risk management classifies climate change as an external risk, which falls outside the corporation's responsibilities,

9. *See, e.g.*, Gadinis & Miazad, *supra* note 8, at 1409 ("Traditional carveouts from shareholder primacy, such as for charitable donations, are too limited to accommodate sustainability, which often calls on companies to redesign core business practices." (footnote omitted)). Arguments for using corporate law to advance sustainability goals may be characterized as "going beyond mere compliance." Light, *supra* note 6, at 139. Professor Light contends that the contours of antitrust law, bankruptcy law, and securities law can shape how corporations address environmental issues. *Id.* at 141 ("[F]irms . . . go[ing] beyond compliance . . . exhibit environmental leadership through private environmental governance.").

10. *See* Einer Elhauge, *Sacrificing Corporate Profits in the Public Interest*, 80 N.Y.U. L. REV. 733, 761 (2005) (stating that corporate managers have a "fiduciary duty to comply with the law even when compliance requires sacrificing profits").

11. *See* Richard S. Gruner & Louis M. Brown, *Organizational Justice: Recognizing and Rewarding the Good Citizen Corporation*, 21 J. CORP. L. 731, 737 (1996) ("Law compliance programs consist of systematic efforts by corporate personnel to ensure that corporate activities comply with applicable laws.").

12. *See infra* Section II.B.

13. Sean J. Griffith, *Corporate Governance in an Era of Compliance*, 57 WM. & MARY L. REV. 2075, 2077 (2016). We do not dispute Professor Griffith's assertion that compliance has undermined the corporation's traditional autonomy as to governance matters, but we argue that mitigating climate change is more important than preserving existing principles of corporate governance. Also, relatively moderate course corrections today may forestall more comprehensive public intervention into the structure of corporate law. For a plausible, albeit necessarily speculative account of such a world, see generally KIM STANLEY ROBINSON, THE MINISTRY FOR THE FUTURE (2020).

14. Geoffrey Parsons Miller, *Compliance: Past, Present and Future*, 48 U. TOL. L. REV. 437, 437 (2017) ("Compliance . . . is coming of age as a field of legal practice, as a subject taught in law schools, and as a field of research and analysis by academics and thoughtful practitioners.").

compliance focuses on internal risks.[15] Once presented as a compliance issue, climate change becomes an internal risk that a corporation may fail to properly address.[16] Second, and relatedly, compliance has a single overriding priority for risks that fall within its purview—eradication. By contrast, when evaluating noncompliance risks, corporations may decide that it is cheaper to insure against possible harms than seek to prevent them.[17] Third, a compliance approach to climate change mitigation offers a robust set of tools for planning, reporting, and oversight.[18]

This Article proceeds as follows. Part II argues that corporate compliance, properly understood, encompasses a strategic approach to assessing risks. Part III argues that a corporation's climate change response should be integrated with its compliance function and not handled solely as a matter of standard risk management or well-meaning, but nonbinding CSR or ESG initiatives. Part IV identifies several avenues for creating compliance obligations concerning climate change, including shared governance through self-regulatory organizations, private ordering in supply chain contracts, securities law disclosures, environmental litigation, shareholder proposals, and proxy challenges.

II. RISK MANAGEMENT VERSUS COMPLIANCE

Corporate "'[c]ompliance' is a system of policies and controls that organizations adopt to deter violations of law and to assure external authorities that they are taking steps to deter violations of law."[19] This Part distinguishes compliance from more general principles of risk management and also explains the rapid expansion of the compliance role in recent years.

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15. *See* James A. Fanto, *The Governing Authority's Responsibilities in Compliance and Risk Management, as Seen in the American Law Institute's Draft Principles of Compliance, Risk Management, and Enforcement*, 90 TEMP. L. REV. 699, 705 (2018) ("Compliance is essentially an internal control function of an organization . . . .").

16. It is possible to further divide each corporation's climate "risks into two major categories: (1) risks related to the transition to a lower-carbon economy and (2) risks related to the physical impacts of climate change." TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES, RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES 5 (2017), https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-TCFD-Report-062817.pdf [https://perma.cc/V46L-EF7M].

17. In a world of limited resources, it could be said that tradeoffs are inevitable regardless of whether a risk involves compliance. Few risks can be fully eradicated. Corporations, however, must make all reasonable efforts to bring compliance risks as close to zero as possible; with respect to other risks, corporations can be expected to act in whatever fashion seems best calculated to maximize their profits.

18. *See infra* Section II.B.

19. Miriam Hechler Baer, *Governing Corporate Compliance*, 50 B.C. L. REV. 949, 958 (2009). Those policies and controls encompass "prevention, detection, investigation, and remediation." Veronica Root, *The Compliance Process*, 94 IND. L.J. 203, 219–20 (2019).

In particular, this Part emphasizes that compliance is now understood to include the enforcement of ethical norms as well as black-letter rules.[20]

A. THE TRADITIONAL DISTINCTION

Corporations seek to earn profits for the benefit of shareholders.[21] A basic feature of the corporation—limited liability for shareholders—incentivizes risk taking by limiting the possibility of shareholder losses to the amount of their investment.[22] Still, there is a difference between sensible risks and foolhardy ones. Corporations undertake risk management to identify significant risks, to evaluate them, and to devise appropriate responses.[23]

When risks are external, i.e., outside the corporation's immediate control, a corporation does not ordinarily have any compliance obligations. For example, a competitor might invent a product that renders the corporation's business model obsolete.[24] Or a key supplier could fail to deliver needed inputs for the production process.[25] Or interest rates could rise.[26] In each case, the corporation might take protective measures in advance, including: investing in its own research and development ("R&D") to invent new products before

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20. *See* Baer, *supra* note 19, at 960 ("Compliance programs also deter wrongdoing by generating social norms that champion law-abiding behavior."); Geoffrey P. Miller, *The Compliance Function: An Overview* 18 (N.Y.U. L. & Econ. Rsch. Paper No. 14–36, 2014), https://ssrn.com/abstract=2527621 [https://perma.cc/K3FS-7NZQ] ("Organizations often include the term 'ethics' in their compliance programs, promulgate codes of 'ethics' that include a compliance component, and create positions such as 'chief ethics officer' that include responsibility for compliance.").

21. *See generally* Henry Hansmann & Reinier Kraakman, *The Essential Role of Organizational Law*, 110 YALE L.J. 387 (2000) (discussing the relationship between shareholders and corporations); *see also* Gadinis & Miazad, *supra* note 8, at 1463 ("For many decades, corporate boards were provided with a clearcut mandate to maximize profits for shareholders, widely interpreted as leaving no space for considering other stakeholders' interests.").

22. *See* STEPHEN M. BAINBRIDGE, CORPORATION LAW AND ECONOMICS 12–13 (2002); Eugene F. Fama & Michael C. Jensen, *Agency Problems and Residual Claims*, 26 J.L. & ECON. 327, 329 (1983) ("Common stock allows residual risk to be spread across many residual claimants who individually choose the extent to which they bear risk and who can diversify across organizations offering such claims.").

23. *See* Virginia Harper Ho, *Risk-Related Activism: The Business Case for Monitoring Nonfinancial Risk*, 41 J. CORP. L. 647, 663 (2016) ("Risk management is the process of identifying, monitoring, reporting and responding to the range of financial, operational and strategic risks that firms face.").

24. *See* Greg Satell, *A Look Back at Why Blockbuster Really Failed and Why It Didn't Have to*, FORBES (Sept. 5, 2014, 11:38 PM), https://www.forbes.com/sites/gregsatell/2014/09/05/a-look-back-at-why-blockbuster-really-failed-and-why-it-didnt-have-to [https://perma.cc/C6VQ-35VY].

25. *See* Susan Helper & Evan Soltas, *Why the Pandemic Has Disrupted Supply Chains*, THE WHITE HOUSE (June 17, 2021), https://www.whitehouse.gov/cea/written-materials/2021/06/17/why-the-pandemic-has-disrupted-supply-chains [https://perma.cc/C7G5-PL97] ("A key reason for the acute problems in motor vehicles is that automakers appear to have underestimated demand for their products after the start of the pandemic.").

26. *See* Brian O'Connell & Benjamin Curry, *What Happens when the Fed Raises Interest Rates?*, FORBES (Dec. 14, 2021, 9:46 AM), https://www.forbes.com/advisor/investing/fed-raises-interest-rates [https://perma.cc/PD9P-VKX4] ("When Fed rate hikes make borrowing money more expensive, the cost of doing business rises for public (and private) companies.").

competitors do; creating redundancies in supply chains; entering interest rate swap deals to hedge against changes in interest rates; etc. But those countermeasures will not be undertaken unless they are judged to be cheaper than the risks they are meant to hedge against. Ultimately, every decision to act or not to act involves risk of some kind.

Compliance pertains to a subset of risks that are best classified as internal to the corporation—those for which the corporation bears direct responsibility. That is, if the law explicitly requires or forbids certain conduct, then the corporation must proceed accordingly and can expect to be held accountable for any violation.[27] For example, whether a corporation's employees will improperly dispose of hazardous materials is a compliance risk because environmental law governs the disposal of hazardous materials.[28] The risk can be mitigated through compliance measures such as training, oversight, and clear communication.[29]

How a risk is classified will affect the corporation's response to it. The goal of traditional risk management is to optimize risk, not necessarily to eliminate it.[30] Indeed, some risks may be embraced as part of an overall business strategy to maximize expected profits. Investors do not want the corporations in their portfolios to play it too safe.[31] With regard to compliance risks, however, potential profits from noncompliance are not a proper part of the calculus.[32] There is, for example, no optimal level of illegal disposal of

27. *See* Baer, *supra* note 19, at 958–59.

28. *See, e.g.*, Resource Conservation and Recovery Act, 42 U.S.C. §§ 6901–02 (2020).

29. In exercising their discretion, federal "[p]rosecutors may credit the quality and effectiveness of a risk-based compliance program that devotes appropriate attention and resources to high-risk transactions, even if it fails to prevent an infraction." CRIM. DIV., U.S. DEP'T OF JUST., EVALUATION OF CORPORATE COMPLIANCE PROGRAMS 3 (2020) [hereinafter EVALUATION OF CORPORATE COMPLIANCE PROGRAMS], https://www.justice.gov/criminal-fraud/page/file/937501/download [https://perma.cc/BF73-55AV].

30. *See* Fikry S. Gahin, *Risk Control and Optimum Security Levels*, 2 J. INS. ISSUES & PRACS. 58, 63–68 (1979) (describing how risks should be modeled to maximize expected gain).

31. By contrast, environmental stewardship seeks safety; it focuses on long-term objectives and does not discount the risk of catastrophic harms. *See* DOUGLAS A. KYSAR, REGULATING FROM NOWHERE: ENVIRONMENTAL LAW AND THE SEARCH FOR OBJECTIVITY 150–75 (2010) (defending precautionary principle that gives weight to the interests of future generations of human beings). *See generally* Joseph Mazor, *Liberal Justice, Future People, and Natural Resource Conservation*, 38 PHIL. & PUB. AFFS. 380 (2010) (contending that sustainability goals should encompass the needs of those who have not yet been born).

32. Commentators have pointed out that some businesses, like Uber, take calculated risks with legal noncompliance in order to leverage their popularity to force regulatory changes. *See* Elizabeth Pollman & Jordan M. Barry, *Regulatory Entrepreneurship*, 90 S. CAL. L. REV. 383, 398–400 (2017). Even if certain startups deliberately push the boundaries of the law, this simply underscores the extent to which compliance with the law is a fundamental norm. *See, e.g.*, Fanto, *supra* note 15, at 709 (noting that "organizational actors cannot publicly assert, as they would for nonlegal risks, that they accept or tolerate a certain number of legal violations in the organization's activities, even if they realize that a compliance program cannot prevent *all* violations").

hazardous materials.[33] A manager would not consult investors, customers, or market conditions before deciding whether to follow the law.[34] Thus, if the goal is to ensure that corporations prioritize climate change, it follows that we should want corporations to treat climate change as a compliance matter rather than fodder for a more general risk-management analysis.[35]

But there is a potential problem. The classic distinction between risk management and compliance creates a divide, leaving the compliance function devoid of a cohesive strategy apart from what is needed to detect and stamp out rule violations. The respective roles for corporate risk management and compliance have been described as follows: "Risk management identifies, assesses, and analyzes risks and seeks ways to mitigate them whereas compliance focuses on meeting established rules, regulations, and standards to prevent [the] organization from regulatory and legal violations that could give rise to serious liabilities."[36] According to this view, compliance "rarely translates into evaluating the financial, operational, and clinical risks of new business propositions, partnerships, and lines of business."[37] In particular, compliance does not play a role in "identifying potential risks in advance that could include . . . *natural disasters*."[38]

Risk management and compliance might be understood as "complementary" processes: "Compliance usually stops with verification that a rule has been followed to avoid risks, whereas risk management must be anticipatory, flexible, and proactive."[39] However, a strict separation of risk management and compliance diminishes the effectiveness of both. Without a robust framework for implementation, risk assessment can become a passive exercise in prediction without a sense of ownership of identified problems. Equally, without an appreciation of the full context, compliance can amount to mere rule following—safeguarding the trees but missing the forest.

To the extent this account of corporate compliance as rule following is accurate, it is understandable why some commentators would view compliance as too rigid to guide a corporation's climate change response: "[C]ompliance officers look to the law in order to fulfill obligations and

33. If viewed purely as a matter of risk management, corporate managers might calculate the risk of getting caught and the severity of the penalty before deciding whether to obey the law.

34. *See, e.g.*, *In re* Massey Energy Co., No. 5430, 2011 WL 2176479, at *20 (Del. Ch. May 31, 2011) ("Delaware law does not charter law breakers."); Metro Commc'n Corp. BVI v. Advanced Mobilecomm Techs. Inc., 854 A.2d 121, 131 (Del. Ch. 2004) ("Under Delaware law, a fiduciary may not choose to manage an entity in an illegal fashion, even if the fiduciary believes that the illegal activity will result in profits for the entity.").

35. *See infra* Section III.C.

36. Richard P. Kusserow, *Understanding the Difference Between Compliance and Risk Management*, J. HEALTH CARE COMPLIANCE, May–June 2020, at 49–50, 68–69.

37. *Id.* at 50.

38. *Id.* (emphasis added). If so, the relevant decision-making might be integrated into other business units, not a compliance department.

39. *Id.* at 68.

identify elements of violations, without much leeway for company-by-company variation . . . . Bound to legal definitions of misconduct, compliance is, by necessity, backwards-looking, reflecting conceptions of harm as they stood at the time of enactment."[40]

Until recently, skepticism concerning the capacity of corporate compliance to address climate change would have been warranted. Those tasked with compliance had little voice in corporate affairs. Certainly, compliance officers would not have been expected to take part in the formulation of corporate strategy.[41] In scale and complexity, climate change is a problem that vastly exceeds the capacities of a narrow, rulebound approach to compliance.[42] Nor would standard risk management provide a viable alternative—once identified as an external, noncompliance risk, the issue of climate change becomes a question of how to maximize expected profits in light of future legal and environmental changes.[43] However, the urgency of the moment requires corporations to take direct responsibility for mitigating climate change.[44] What is needed, therefore, is a hybrid approach that blends the strategic aspect of risk management with the problem-solving mindset of compliance. As discussed in the next Section, modern-day compliance offers the best of both worlds.

B. A Risk-Based Approach to Compliance

The limited definition of compliance is fast becoming outdated and ignores the extent to which compliance is now understood to include forward-looking strategic considerations. As one commentator observed, "the job of compliance has increasingly moved away from a mechanical approach to a

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40. Gadinis & Miazad, *supra* note 8, at 1431.

41. *See* Miller, *supra* note 14, at 437 ("Twenty years ago, . . . [c]ompliance officers tended to work in cubicles and performed a sort of glorified bookkeeping task, making sure that forms were filled out and boxes checked. But they did not play a strategic role in the management of enterprise.").

42. *See* Light, *supra* note 6, at 148 (arguing that "environmental law, which tends to focus on controlling, reducing, or reporting significant amounts of pollution emitted from pipes and smokestacks . . . cannot as easily induce the needed small changes in the behavior of many individuals and firms").

43. As one commentator observes: "This is a strange thesis. 'We predict future environmental regulation and optimize our cash flows for that regulation' is not an obvious substitute for 'we invest to make the world a better place.'" Matt Levine, *Hedge Funds Are a Job Now*, BLOOMBERG: OPINION (Feb. 1, 2022, 12:57 PM), https://www.bloomberg.com/opinion/articles/2022-02-01/hedge-funds-are-a-job-now [https://perma.cc/5XZD-BDUA].

44. *See* Sarah Kaplan, *Climate Change Has Gotten Deadly. It Will Get Worse*, WASH. POST (Jul. 3, 2021, 8:01 AM), https://www.washingtonpost.com/climate-environment/2021/07/03/climate-change-heat-dome-death [https://perma.cc/G2LQ-PRTK] ("If we continue to burn fossil fuels at the current rate, studies suggest, the Earth could be 3 to 4 degrees Celsius hotter by the end of the century. The Arctic will be free of ice in summertime. Hundreds of millions of people will suffer from food shortages and extreme drought. Huge numbers of species will be driven to extinction. Some regions will become so hot and disaster-prone they are uninhabitable.").

risk-based approach."[45] To reduce risk, compliance programs seek to "deter wrongdoing by generating social norms that champion law-abiding behavior."[46] Compliance departments not only investigate possible violations of law, but also set policy.[47] Compliance policies are designed to create "an ethical culture that asks: 'What is the right and ethical thing to do?', an inquiry that permeates daily decisions."[48] In their scope, modern "compliance programs go far beyond what is needed to avoid lawbreaking."[49] In short, concerns about the narrowness of compliance no longer hold true.

Although a full account of the evolution of compliance is beyond the scope of this Article,[50] one commentator observes that "Congress ushered in the modern corporate-compliance movement by enacting the Foreign Corrupt Practices Act [("FCPA")]."[51] Suffice to say that corporate boards have learned that a robust compliance function is essential in order to stay on the right side of federal prosecutors and to meet their own fiduciary duties of care, good faith, and loyalty.[52] Consistent with the expanded role of compliance

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45. Miller, *supra* note 14, at 438.

46. Baer, *supra* note 19, at 960 ("Norm-based compliance programs . . . permit organizations to discipline employees for violations that transgress social norms, but otherwise fall just short of legal violations."); *see also* U.S. SENT'G GUIDELINES MANUAL § 8B2.1(a)(2) (U.S. SENT'G COMM'N 2018) (mandating that corporations "promote an organizational culture that encourages ethical conduct and a commitment to compliance with the law").

47. Baer, *supra* note 19, at 960 ("Compliance personnel frequently write and revise corporate-wide codes of business conduct.").

48. Maurice E. Stucke, *In Search of Effective Ethics & Compliance Programs*, 39 J. CORP. L. 769, 826 (2014). By contrast, "firms under an extrinsic approach . . . demand to know what is expected of them from the government, namely what specific steps they must undertake to meet the regulator's narrow legalistic requirements of effective compliance." *Id.* Professor Stucke observes that this "is not a recipe for success," which is why regulators now expect a culture of compliance. *Id.* Admittedly, there is an "uneasy boundary" between corporate ethics and compliance, but some overlap is inescapable because "notions of a culture of compliance and tone at the topic cannot be strictly limited to formal legal requirements." Miller, *supra* note 20, at 18.

49. Claire A. Hill, Caremark *as Soft Law*, 90 TEMP. L. REV. 681, 682 (2018).

50. For a helpful historical discussion of Delaware law concerning board fiduciary duties and compliance, see Elizabeth Pollman, *Corporate Oversight and Disobedience*, 72 VAND. L. REV. 2013, 2021–25 (2019).

51. Baer, *supra* note 19, at 962. The FCPA was the brainchild of Stanley Sporkin, then-Director of the SEC's Division of Enforcement. His insight was that Congress could deter bribery, not only by prohibiting it directly, but also by requiring corporations to maintain accurate books and records. *See* Stanley Sporkin, *The Worldwide Banning of Schmiergeld: A Look at the Foreign Corrupt Practices Act on Its Twentieth Birthday*, 18 NW. J. INT'L L. & BUS. 269, 274 (1998) ("I theorized that requiring the disclosure of all bribes paid would, in effect, foreclose that activity.").

52. *See generally* EVALUATION OF CORPORATE COMPLIANCE PROGRAMS, *supra* note 29 (providing a framework for prosecutors to determine whether corporations have achieved adequate corporate compliance). *See In re* Caremark Int'l Inc. Derivative Litig., 698 A.2d 959, 967–69 (Del. Ch. 1996); Stone *ex rel.* AmSouth Bancorporation v. Ritter, 911 A.2d 362, 369, 373 (Del. 2006) (adopting *Caremark*); Hill, *supra* note 49, at 689 ("Government regulators take into consideration whether a company has a robust compliance program, one which goes beyond a narrow focus on not breaking the law, when determining how to proceed when illegality is suspected.").

within the corporation, compliance officers have achieved new status and respect.[53] The Chief Compliance Officer typically reports directly "to the CEO and sometimes to a board committee, such as the Board Audit Committee, Risk Committee, or Compliance Committee."[54]

As a case in point, consider the role of compliance in U.S. financial institutions. The Federal Reserve Board of Governors has stated that it expects "firmwide compliance risk management" which encompasses "the processes established to manage compliance risk across an entire organization, both within and across business lines, support units, legal entities, and jurisdictions of operation."[55] The Board of Governors has explained that "compliance risk management benefits from an aggregate view of the organization's compliance risk exposure and an integrated approach to managing those risks."[56] To that end, "[t]he processes established for managing compliance risk on a firmwide basis should be formalized in a compliance *program* that establishes the framework for identifying, assessing, controlling, measuring, monitoring, and reporting compliance risks across the organization, and for providing compliance training throughout the organization."[57] Once established, a "compliance risk management program should be documented in the form of compliance policies and procedures and compliance risk management standards."[58] A compliance program built to these specifications has the capacity to participate as a full partner in corporate decision-making.

Further solidifying the emergence of compliance as a major corporate governance topic, the American Law Institute is finalizing a project entitled *Principles of the Law: Compliance and Enforcement for Organizations* ("ALI Principles"). This document, nearly 500 pages in its current iteration, provides a full statement of the new corporate compliance and how it differs, not only from earlier bean-counting approaches to compliance, but also from more traditional approaches to risk management. Notably, an earlier version of the ALI Principles included "Risk Management" in its title, but the drafters

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53. John C. Krenitsky, *Defining the Chief Compliance Officer Role*, 6 AM. U. BUS. L. REV. 303, 303 (2017) ("The role of Chief Compliance Officer . . . is relatively new in the evolution of Corporate Governance."); Diana E. Murphy, *The Federal Sentencing Guidelines for Organizations: A Decade of Promoting Compliance and Ethics*, 87 IOWA L. REV. 697, 710 (2002) (noting creation of "an entirely new job description: the Ethics and Compliance Officer").

54. Miller, *supra* note 14, at 438.

55. Letter from Deborah P. Bailey & Glenn E. Loney, Deputy Dirs., Bd. of Governors of the Fed. Rsrv. Sys., to the officer in charge of supervision and appropriate supervisory and examination staff at each Fed. Rsrv. bank and certain orgs. supervised by the Fed. Rsrv. (Feb. 26, 2021), https://www.federalreserve.gov/Boarddocs/srletters/2008/sr0808.htm [https://perma.cc/U6ZD-K2L8] ("Organizations supervised by the Federal Reserve, regardless of size and complexity, should have effective compliance risk management programs that are appropriately tailored to the organizations' risk profiles.").

56. *Id.*

57. *Id.*

58. *Id.*

removed that language "to make clear that our treatment of risk management was focused exclusively on the compliance function."[59]

As the drafters of the ALI Principles wished to clarify, compliance risks are a distinct subset of the risks that a corporation faces. As noted above, compliance is about accountability to legal, political, and ethical standards. By contrast, the lodestar of risk management is profitability. The ALI drafters explain that there is a difference between accepting risk in general and tolerating a risk of noncompliance:

> As to risks other than compliance risks, an organization may conclude that given its risk appetite, risk tolerance, and risk capacity, and the particular risks and aggregate level of risk it faces, it should take on more risk. However, the organization may not make such a conclusion with respect to compliance risk. An organization may not choose to take on more compliance risk . . . nor may an organization decide that a compliance risk event that has come to pass (a compliance failure) is within its risk tolerance.[60]

Consequently, an important threshold consideration is whether a particular risk should be assigned to the compliance function or handled as part of a broader strategic assessment of risk.

For risks that fall within the scope of compliance, the ALI Principles, which are partly descriptive and partly precatory, represent best practices for business organizations. These recommended best practices include, for example: implementing controls, developing "a risk-response plan," and conducting internal investigations of possible violations.[61] To ensure that problems receive immediate attention, the ALI Principles further state that "[a]n organization's risk-management program and risk culture should encourage its employees at all levels to report on matters relevant to its monitoring of risk, including compliance risk, and otherwise participate appropriately, as determined by the organization, in its risk monitoring."[62] Finally, the ALI Principles include "best practices to govern discretionary enforcement decisions in state and federal prosecutions and civil and regulatory enforcement actions arising from knowing or intentional misconduct

59. Richard L. Revesz, *Foreword* to PRINCIPLES OF THE L. OF COMPLIANCE & ENF'T FOR ORGS, at xxi, xxi (AM. L. INST. 2021).

60. PRINCIPLES OF THE L. OF COMPLIANCE & ENF'T FOR ORGS. § 4.01 cmt. k (AM. L. INST. 2021).

61. *Id.* § 4.10(c). The drafters observe that "[a]n organization can minimize its exposure to certain legal or regulatory perils by conducting repeated or additional testing of a product or process, adding requirements for approvals or oversight, or requiring that other safeguards be in place before it selects contracting partners, renders or accepts performance, or receives or makes payments." *Id.* § 410 cmt. c.

62. *Id.* § 4.11(d).

by organizations."[63] In sum, corporate compliance programs today are expected to be proactive and thorough. In the next Part, we argue that the problem of climate change is well suited to a compliance framework.

III. THE CASE FOR CLIMATE CHANGE COMPLIANCE

Climate change is already disrupting global weather patterns.[64] For example, during the drafting of this Article, the Pacific Northwest experienced a weeks-long spell of unprecedented high temperatures. According to news reports, public officials were "investigating more than 800 deaths potentially linked to the punishing heat."[65] Meanwhile, unusual and dangerous weather conditions extended far beyond the Pacific Northwest:

> The heat dome was just one of a barrage of climate catastrophes that struck the world in recent weeks. Western wildfires are off to a scorching start, with firefighters actively battling 44 large blazes that have burned nearly 700,000 acres. Parts of Florida and the Caribbean are bracing for landfall of Hurricane Elsa, the Atlantic's fifth named storm in what is one of the most active starts to hurricane season on record. Nearly half a million people in Madagascar are at risk of starvation as the country grapples with dust storms, locusts and its worst drought in decades. In Verkhoyansk, Siberia—usually one of the coldest inhabited places on the planet—the land surface temperature was 118 degrees.[66]

These crises should not come as a surprise. There is a strong scientific consensus that human beings have increased global temperatures by about two degrees Fahrenheit since the dawn of the industrial era and that this incremental rise in temperature has increased the frequency of disasters and made them more dangerous. As the chief scientist for the Nature Conservancy explained, "[c]limate change has loaded the weather dice against us."[67]

Although it is not possible to state with certainty how greenhouse gas emissions will affect the planet in the future, "[w]e can be highly confident about the existence of human-caused climate change and the likelihood that

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63. Geoffrey P. Miller, Jennifer H. Arlen, James A. Fanto & Claire H. Hill, *Reporters' Memorandum*, *in* PRINCIPLES OF THE L. OF COMPLIANCE & ENF'T FOR ORGS., at xxiii, xxiii (AM. L. INST. 2021).

64. *See Climate Change Indicators: Weather and Climate*, U.S. ENV'T PROT. AGENCY (May 12, 2021), https://www.epa.gov/climate-indicators/weather-climate [https://perma.cc/V8WC-XLYE] ("Rising global average temperature is associated with widespread changes in weather patterns.").

65. Kaplan, *supra* note 44; Bob Berwyn, *A Week After the Pacific Northwest Heat Wave, Study Shows It Was 'Almost Impossible' Without Global Warming*, INSIDE CLIMATE NEWS (July 7, 2021), https://insideclimatenews.org/news/07072021/pacific-northwest-heat-wave-attribution-study-climate-change [https://perma.cc/9ZEY-ZPX3].

66. Kaplan, *supra* note 44.

67. *Id.*

it will have serious effects."[68] Most scientists have concluded that reducing global greenhouse gas emissions is the only way to mitigate climate change.[69] Otherwise, we risk "catastrophic warming . . . by the end of this century."[70] Avoiding the worst-case outcomes "will require leveling off greenhouse gas emissions in the near term and reductions of 60 to 80 percent from present levels by 2050."[71] To avoid crossing a line of no return, such measures should be implemented immediately.[72]

The scale of climate change vastly exceeds any individual corporation's activities.[73] Collectively, though, corporations account for much of the carbon usage that drives climate change. According to one report, 100 fossil fuel companies alone produce 71 percent of global emissions.[74] Staving off the worst impacts of climate change therefore requires corporations to take

68. Daniel A. Farber, *Uncertainty*, 99 GEO. L.J. 901, 938 (2011) (noting "strong residual uncertainty . . . about the scale of climate change impacts, both globally and regionally" and arguing that this uncertainty calls for even greater precautions against worst-case outcomes).

69. *See generally, e.g.*, Kyoto Protocol to the United Nations Framework Convention on Climate Change, 2303 U.N.T.S. 162 (1998), http://unfccc.int/resource/docs/convkp/kpeng.pdf [https://perma.cc/GX33-YKS3] (setting emission targets as a means of responding to climate change). But some commentators hold out hope that alternative technologies can abate global warming without the need for massive restructuring of our carbon-based economy. *See* Alan Carlin, *Global Climate Change Control: Is There a Better Strategy than Reducing Greenhouse Gas Emissions?*, 155 U. PA. L. REV. 1401, 1404 (2007) ("One of the major difficulties in solving climate change problems results from the fact that no one has really leveled with the public as to how difficult it would be to achieve the goals that the advocates of emissions control believe are necessary."). Without disputing the point that transitioning from a carbon-based economy will be extraordinarily difficult, we observe that technological innovations over the past 15 years have radically reduced the cost of alternative fuels. For example, electric cars that were too impractical and expensive to take seriously when Professor Carlin's article was published appear likely to take over our roads in the next several years. One of us has driven an electric car.

70. SARAH BARKER, CYNTHIA WILLIAMS & ALEX COOPER, COMMONWEALTH CLIMATE & L. INITIATIVE, FIDUCIARY DUTIES AND CLIMATE CHANGE IN THE UNITED STATES 2 (2021), https://ccli.ubc.ca/wp-content/uploads/2021/12/Fiduciary-duties-and-climate-change-in-the-UnitedStates.pdf [https://perma.cc/M5NL-TFDA].

71. Michael P. Vandenbergh, Jack Barkenbus & Jonathan Gilligan, *Individual Carbon Emissions: The Low-Hanging Fruit*, 55 UCLA L. REV. 1701, 1702 (2008).

72. *See* USGCRP, *supra* note 1, at 5 ("While some climate changes will occur slowly and relatively gradually, others could be rapid and dramatic, leading to unexpected breaking points in natural and social systems.").

73. *See* J.B. Ruhl & James Salzman, *Climate Change, Dead Zones, and Massive Problems in the Administrative State: A Guide for Whittling Away*, 98 CAL. L. REV. 59, 64 (2010) ("Climate change is as big and unwieldy a problem as they come . . . .").

74. *See generally* PAUL GRIFFIN, THE CARBON MAJORS DATABASE: CDP CARBON MAJORS REPORT (2017), https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf [https://perma.cc/A2Z9-UUJ4] (compiling and illustrating data on "fossil fuel producers" to inform investors about the carbon emissions of various companies); Tess Riley, *Just 100 Companies Responsible for 71% of Global Emissions, Study Says*, GUARDIAN (Aug. 25, 2021, 9:54 AM), https://www.theguardian.com/sustainable-business/2017/jul/10/100-fossil-fuel-companies-investors-responsible-71-global-emissions-cdp-study-climate-change [https://perma.cc/4LUJ-5TMX] ("Just 100 companies have been the source of more than 70% of the world's greenhouse gas emissions since 1988, according to a new report.").

concerted action to reduce their carbon footprint and to mitigate disaster-related harm. Unfortunately, "[f]or-profit corporations are not designed to solve a long-term, planet-wide, collective action problem like climate change."[75] Yet, in the absence of a Green New Deal or other environmental legislation adequate to the task, the reality is that there is no satisfactory alternative to reliance on corporations.[76] This Part argues that a compliance-based approach can supplement weaknesses in existing risk management and CSR strategies and spur corporations to commit to climate change mitigation efforts.

A. *The Limits of Risk Management*

Climate change mitigation is not necessarily incompatible with a traditional risk management perspective. Any list of strategic risks confronting a corporation today would surely include climate change. As a matter of risk management, therefore, addressing climate change may be advisable, especially when the costs of inaction appear significant.[77]

Corporations can sometimes justify climate change mitigation measures solely in reference to a for-profit motivation:

> A firm that has more employees than it needs in its shipping department is operationally ineffective; its managers are wasting resources and creating a drag on performance. In the same way, a firm that produces excess emissions in its shipping operations is also operationally ineffective—it is wasting resources and incurring unnecessary costs that are certain to rise. Implementing best practices

75. Brett McDonnell, Hari M. Osofsky, Jacqueline Peel & Anita Foerster, *Green Boardrooms?*, 53 CONN. L. REV. 335, 399 (2021). If one corporation voluntarily makes itself less profitable by addressing externalities that the law permits it to ignore, other less squeamish competitors will rush to take advantage of the opportunity. *See* Michael C. Jensen, *Value Maximization, Stakeholder Theory, and the Corporate Objective Function*, 14 J. APPLIED CORP. FIN. 8, 16 (2001) (contending that well-meaning corporations "will be eliminated by competitors who choose not to be so civic minded").

76. *See* McDonnell et al., *supra* note 75, at 399 ("Those advocating for deep reform of corporate law can flip the script on what to infer from the limited results of corporation-focused activism. Given the ongoing failure of governments to seriously respond to climate change, the urgency of addressing climate change, and the central role that corporations play in the economy, if corporations as currently constituted are not up to the task, we need to reconstitute them."). This task could involve questioning existing assumptions about corporate governance. *See, e.g.*, GRANT M. HAYDEN & MATTHEW T. BODIE, RECONSTRUCTING THE CORPORATION: FROM SHAREHOLDER PRIMACY TO SHARED GOVERNANCE, at xi (2020) ("Building on eighty years of research into the nature of the firm, we derive a governance model based on joint production, in which the participants within the firm have a right to participate in the governance of the firm.").

77. *See* Williams, *supra* note 2, at 1883 ("[O]ur collective understanding of climate change has evolved from construing it as a purely ethical or environmental externality to recognizing it as an issue that poses foreseeable financial risks and opportunities for U.S. companies and systemic risks to the financial system across short-, medium-, and long-term horizons.").

> in managing climate-related costs is the minimum required to remain competitive.[78]

Thus, a corporation's response to climate change need not be motivated solely by ethical concerns. Viewed in this light, firing unneeded employees and controlling carbon emissions can be seen as ethically equivalent decisions aimed toward the goal of operating the corporation on the most profitable basis permitted by law.

From a risk management perspective, opportunities for profit could also weigh into the decision-making process and support climate mitigation. By taking the initiative and publicizing their climate change activities, corporations can gain a competitive advantage over rivals unwilling to make similar commitments. For example, one U.K. grocery store attempted to outdo other supermarket chains by aligning itself with customers concerned about climate change: "Marks & Spencer announced that it would go 'carbon neutral,' coming out with a 100-point action plan on climate change and the environment. Conveying a dramatic sense of urgency, company CEO Stuart Rose observed, 'We are calling this "Plan A" because there is no "Plan B."'"[79] An approving commentator described Marks & Spencer's announcement as a clever business stratagem, attributable in large part to competition for market share.[80]

If profit maximization always lined up with climate change goals, the distinction between risk management and compliance would not matter. Regrettably, this is wishful thinking. The pressures of a competitive marketplace do not always reward climate change mitigation.[81] Therefore, unless corporate managers treat climate change as a compliance obligation, they may conclude that it is more efficient to absorb the costs of climate change later, should a disaster occur.[82] Notwithstanding the overwhelming case for adopting sustainable business practices as a matter of environmental stewardship, corporate managers may decide that the costs an individual corporation

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78. Michael E. Porter & Forest L. Reinhardt, *Grist: A Strategic Approach to Climate*, HARV. BUS. REV. (Oct. 2007), https://hbr.org/2007/10/climate-business-_-business-climate%5D [https://perma.cc/5L28-B5NZ].

79. Daniel C. Esty, *Transparency: What Stakeholders Demand*, HARV. BUS. REV. (Oct. 2007), https://hbr.org/2007/10/climate-business-_-business-climate%5D [https://perma.cc/5L28-B5NZ].

80. *Id.* (observing that "smart management of environmental issues has become a way to positively shape brand image and attract new customers").

81. *See* Light, *supra* note 6, at 204 (pointing out that "[e]nvironmental values could be outweighed by the balance of other factors, or even a strong showing on one factor, when competing values point in a different direction").

82. *See* Porter & Reinhardt, *supra* note 78 (arguing that corporations should evaluate their vulnerability to climate change risks and then "decide which to reduce through redesigning operations, which to transfer to others through insurance or hedging contracts, and which to bear"). The authors distinguish their recommended risk-management practices from fuzzier notions of corporate social responsibility, and the corporation's choices are presumed to turn on "operational effectiveness" rather than any inherent objective to combat global warming. *See id.*

would undergo to abandon carbon-intensive production processes are not worth it.[83]

Perhaps brand value can compensate for climate change mitigation costs, but that will not always be true, especially for non-consumer-facing businesses that do not depend on public goodwill.[84] Also, while many investors and consumers have indicated that sustainability is important, it is unclear whether enough of them will accept higher prices and other inconveniences as the price for a better future.[85] Thus, CEOs and boards viewing climate change from a standard risk management perspective might question whether there is a mandate for profit-reducing measures and take the shortsighted view that either others will solve the problem of climate change, or it will not be solved. In the meantime, the profits earned by the corporation provide a concentrated benefit, whereas the value of contributions to global wellbeing are dispersed widely.[86]

In sum, the concept of risk management cannot solve the collective action problems generated by climate change.[87] As one commentator explains:

> Climate change threatens to be the externality that ate the world. Within a year of its release, carbon dioxide is dispersed uniformly through the earth's atmosphere. Whoever uses energy derived from fossil fuels gets the full benefit of that power while evenly dividing the atmospheric harm with somewhat more than 6.8 billion others. That is a ratio of benefit to harm all but certain to induce overindulgence.[88]

83. *See* Gadinis & Miazad, *supra* note 8, at 1425 ("Directors and officers can opt for any . . . strategy they choose, even some that are in direct conflict with ESG goals.").

84. *See id.* (observing that public pressure will not always matter because "not all ESG initiatives are directly visible to consumers, and there are many industries that are not consumer-facing").

85. *See* Joseph C. Sternberg, Opinion, *The Climate-Change Agenda Goes Out with a Bang*, WALL ST. J. (July 15, 2021, 1:02 PM), https://www.wsj.com/articles/climate-change-summit-cop26-cost-esg-carbon-11626297240 [https://perma.cc/4QHN-GJWL] ("[I]n Japan, climate-minded shareholders have just wrapped up a disastrous (for them) season of annual shareholder meetings. Resolutions codifying aggressive corporate carbon targets were defeated at all three companies where activists proposed them—Mitsubishi UFJ, Sumitomo and Kansai Electric Power.").

86. Nation states can make the same self-interested calculation. *See* Jody Freeman & Andrew Guzman, *Climate Change and U.S. Interests*, 109 COLUM. L. REV. 1531, 1534 (2009) (critiquing as shortsighted arguments that "climate change is a collective action problem, and the best American policy would be to free ride on the efforts of more significantly affected states"). Apart from moral considerations for action, those who are capable of mitigating climate change should bear in mind the "absolute" costs involved, not just whether they would be likely to fare better than other more vulnerable populations. *See id.* at 1539.

87. For a classic explanation of collective action as a challenge for public policy, see generally MANCUR OLSON, THE LOGIC OF COLLECTIVE ACTION: PUBLIC GOODS AND THE THEORY OF GROUPS (1965).

88. Jedediah Purdy, *The Politics of Nature: Climate Change, Environmental Law, and Democracy*, 119 YALE L.J. 1122, 1132 (2010). Moreover, "the benefits of mitigating climate change will accrue to future generations while the living bear the costs." *Id.* at 1134.

Or, put slightly differently, "[c]limate change is the mother of all externalities."[89] A corporation *could* voluntarily set targets to reduce carbon emissions beyond what the law mandates, if doing so seemed advisable as a matter of risk management, but sustainability is not itself a legal obligation of the corporate form.[90] By contrast, once placed within a compliance framework, the harms caused by climate change cannot be dismissed as a tolerable byproduct of corporate activity.

Ideally, lawmakers would act to align the interests of individual corporations and society, setting a clear timetable for decarbonization.[91] Whether styled as a Green New Deal or couched in more neutral language, what is needed is a comprehensive regulatory regime that can facilitate the transition of the U.S. and global economies.[92] But in the absence of clear legal rules to follow, corporations must find some way to act collectively for the common good. The dilemma each corporation confronts is that other corporations may fail to accept their shared obligation and may act in individually rational but collectively irrational ways.[93] Risk management does not provide a solution to this problem. If anything, risk management encourages defection because it leaves each corporation to navigate risks for its own individual benefit in a world of zero-sum market competition.

B. *The Limits of CSR and ESG*

CSR and ESG (hereinafter, "ESG" collectively for ease of reference) appear to be better candidates for organizing a corporation's climate change response because they are not tied so tightly to shareholder profits.[94] Unlike

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89. Richard S. J. Tol, *The Economic Effects of Climate Change*, 23 J. ECON. PERSPS. 29, 29 (2009).

90. One direction for law reform efforts is to introduce such a requirement. *See, e.g.*, Light, *supra* note 6, at 149 ("If firm managers in ordinary corporations were affirmatively required to consider environmental values and goals alongside profits, corporate law could alter their calculus in deciding whether to reduce their environmental footprints or adopt private environmental governance.").

91. *See* Richard J. Lazarus, *Super Wicked Problems and Climate Change: Restraining the Present to Liberate the Future*, 94 CORNELL L. REV. 1153, 1155–56 (2009) ("To reduce the nation's greenhouse gas emissions from 1990 levels by as much as 60 percent to 80 percent by 2050 and then maintain that emissions level throughout the twenty-first century will require Congress to craft an ambitious mix of regulatory programs and economic incentives. Those programs must fundamentally change business operations in virtually every economic sector as well as individual behavior in many aspects of daily life.").

92. *See* Lisa Benjamin, *The Road to Paris Runs Through Delaware: Climate Litigation and Directors' Duties*, 2020 UTAH L. REV. 313, 346 (stating that the Green New Deal "aims for net-zero emissions through decarbonizing the electricity grid, transportation systems, and industry").

93. To the extent meeting climate change goals is also individually rational for a corporation, there should be no impediment to action, but "while it may sometimes be possible to square the circle and find shared value, one must at least acknowledge that this is not always the case." Light, *supra* note 6, at 204.

94. In treating CSR and ESG as a single concept, we acknowledge that "[t]he boundaries of these terms . . . are not precise—sometimes CSR and ESG are used interchangeably, and although ESG is frequently used in the context of risk management and risk-adjusted returns, it

corporate risk management, a commitment to ESG can readily accommodate the interests of non-shareholder stakeholders such as consumers, workers, communities, and the environment. Indeed, ESG is meant to ensure that those considerations receive appropriate weight in corporate decision-making.[95] For this reason, ESG may be better suited to addressing a problem as all-encompassing as climate change. There are, however, two problems that limit the ability of ESG to serve as the primary framework for climate change mitigation.

First, because ESG is not part of the formal structure of corporate law or tied to specific external laws or regulations, ESG commitments are purely voluntary:

> ESG represents an attempt by companies to self-regulate their conduct. Terms like "corporate sustainability," "environmental, social, and governance" issues, and "triple bottom line" have been used widely, and often interchangeably with preexisting concepts like "corporate social responsibility." Broadly speaking, these terms refer to voluntary actions taken by a company to manage its own environmental and social impacts. In this way, they are distinct from actions taken in response to a legal or contractual obligation.[96]

Corporate ESG commitments have no legal force or effect and are, therefore, impermanent.[97] Should previous commitments concerning climate change prove to be inconvenient, corporate managers can walk away from them so long as the benefits of changing course outweigh the loss of reputational capital.[98] Indeed, corporations may shy away from making commitments in the first place: "The intractability of problems like climate change makes ESG commitments sound like hollow promises engineered by public relations

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is also used sometimes to refer to social benefits." Elizabeth Pollman, *Corporate Social Responsibility, ESG, and Compliance*, *in* THE CAMBRIDGE HANDBOOK OF COMPLIANCE 662, 666 (Benjamin van Rooij & D. Daniel Sokol eds., 2021) [hereinafter Pollman, *Corporate Social Responsibility*]; Harper Ho, *supra* note 23, at 651 ("The term 'ESG' is now widely used by institutional investors and investment professionals to refer not only to sustainability measures or to environmental, social, or governance practices specifically, but to all nonfinancial fundamentals that can impact firms' financial performance, such as corporate governance, labor and employment standards, human resource management, and environmental practices.").

95. *See* Harper Ho, *supra* note 23, at 651.

96. Gadinis & Miazad, *supra* note 8, at 1415–16.

97. As discussed *infra* Section IV.A.3, one solution to this problem is to integrate ESG with corporate compliance, giving compliance managers the authority to oversee ESG commitments, once made, as legal obligations.

98. *See* Sternberg, *supra* note 85 ("Japan's Government Pension Investment Fund, the world's largest with around $1.6 trillion under management, is abandoning trendy ESG investing."). According to one of the fund's senior directors, "[t]he strategy was a financial loser, and 'we can't sacrifice returns for the sake of buying environmental names or ESG names.'" *Id.*

teams to claim the allure of good citizenship."[99] Put bluntly, the absence of an underlying legal obligation limits ESG's effectiveness.[100]

Second, assuming that corporate managers would persevere in voluntary efforts to mitigate climate change, an ESG approach can conflict with the interests of shareholders in earning profits on their investment.[101] Thus, if taken beyond certain limits, which may be clear only in hindsight, efforts to address climate change as a matter of ESG are subject to challenge in court and may be ruled an illegitimate use of corporate resources.[102] The business judgment rule gives corporate managers discretion to make decisions for the corporation, but it does so because those managers owe a fiduciary duty to prioritize the interests of the corporation.[103] Mitigating climate change will require significant upfront costs. If presented as part of a corporation's ESG initiatives, such costs will be vulnerable to shareholder objections.[104]

Advocates of ESG might respond that, in the long term, climate change mitigation *is* in the best interests of shareholders, not only as investors but also as human beings who do not want to destroy the planet they and their

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99. Gadinis & Miazad, *supra* note 8, at 1419.

100. *Id.* ("Public statements of support by key players, like Larry Fink or the Business Roundtable, express vague allegiance to universal values, but do not commit the author to any specific actions, nor do they have any legal implications.").

101. *See* Judd F. Sneirson, *Green Is Good: Sustainability, Profitability, and a New Paradigm for Corporate Governance*, 94 IOWA L. REV. 987, 989 (2009) ("The problem is that 'green' or 'sustainable' business practices can sometimes entail profit sacrifices, particularly in the short term. A conflict thus arises with the commonly held view that corporate directors and officers must strive to maximize shareholder wealth and affirmatively neglect other corporate constituencies like labor, creditors, suppliers, customers, the public, and the environment."); Roberta Romano, *Metapolitics and Corporate Law Reform*, 36 STAN. L. REV. 923, 961 (1984) ("[P]rofit maximization is the only goal for which we can at least theoretically posit shareholder unanimity.").

102. *See* eBay Domestic Holdings, Inc. v. Newmark, 16 A.3d 1, 25–26 (Del. Ch. 2010) (holding that eBay's controlling shareholders' refusal to monetize eBay's online classified advertisements violated their duty of loyalty and was not an appropriate exercise of discretion). For criticism of the court's decision, see Benjamin Means, *The Value of Insider Control*, 60 WM. & MARY L. REV. 891, 934 (2019) ("To identify profits as the sole legitimate objective of the corporate form is to endorse an impoverished view of what corporations can accomplish."). Nevertheless, whatever the merits of a theory of corporate law that would permit those in control of the corporation to act as "stewards for the benefit of all stakeholders," the reality is that many courts will continue to adhere to "a shareholder-maximization model of corporate governance." *Id.*

103. *See* Mark J. Roe, *The Shareholder Wealth Maximization Norm and Industrial Organization*, 149 U. PA. L. REV. 2063, 2065 (2001) ("Shareholder wealth maximization is usually accepted as the appropriate goal in American business circles . . . . The utilitarian justification is that this preference is the price paid for strong capital markets, and allocative efficiency . . . ."); Henry Hansmann & Reinier Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 440 (2001) ("The five basic characteristics of the corporate form provide, by their nature, for a firm that is strongly responsive to shareholder interests.").

104. *See* Gadinis & Miazad, *supra* note 8, at 1416 ("Whether doing what is best for shareholders would have grave social implications is not a relevant consideration . . . .").

children and grandchildren will inhabit.[105] Or, perhaps more to the point, climate change mitigation is necessary for a corporation to remain viable and, therefore, profitable.[106] Discounted to present value, however, it will not always be clear that those future benefits justify the losses incurred.[107] The business judgment rule leaves ample room for corporate managers to make temporal calculations,[108] but there are limits. The unprecedented scale of mitigation efforts required to address climate change is likely to push those limits.[109]

Another possible response to the profit-maximization objection is to reframe ESG as a way of identifying social risks that would otherwise be missed by a shareholder-centric corporate governance approach:

> We argue that ESG serves shareholders' interests, not because of its upside potential to increase profits, but because it helps companies identify and manage social risks to their business . . . . Core ESG issues such as privacy, climate change, or diversity, though arising out of sweeping technological advances or large-scale societal changes, also implicate individual company decisions.[110]

The argument presumes that compliance cannot accomplish the same objectives because it is primarily backward looking and focused on legal risks.[111] Thus, advocates of an ESG approach assert that compliance does not

105. *See* Oliver Hart & Luigi Zingales, *Companies Should Maximize Shareholder Welfare Not Market Value*, 2 J.L. FIN. & ACCT. 247, 259 (2017).

106. *See* Gadinis & Miazad, *supra* note 8, at 1424 ("If boards and managers choose the sustainable option because they believe it is also going to lead to higher profits, then there is no clash with shareholder primacy.").

107. *See* Levine, *supra* note 43.

108. *See, e.g.*, Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247, 299–305 (1999) (arguing that the business judgment rule permits corporate managers to prioritize longer-term interests).

109. Nestlé's CEO spoke frankly about the challenge of maintaining profitability while also meeting the company's public commitment "to halve our greenhouse gas emissions by 2030 and to achieve net-zero carbon emissions by 2050." Mark Schneider, *Nestlé CEO: We Don't Have to Sacrifice Shareholders to Fight Climate Change*, FORTUNE (Feb. 17, 2021, 5:30 AM), https://fortune.com/2021/02/17/fighting-climate-change-business-shareholders-investments-nestle-ceo-mark-schneider [https://perma.cc/648V-LXY6] ("The upfront costs of seeking greenhouse-gas neutrality are no different than other types of forward-looking expenditures, such as R&D spending. Without them, a business will wither. This does not mean businesses can invest heedlessly. The size of the spend must be carefully calibrated. Internal savings will need to be targeted so resources can be shifted toward climate work without hurting near-term profits.").

110. Gadinis & Miazad, *supra* note 8, at 1410.

111. *See id.* at 1413 ("We argue that the scope of issues highlighted by sustainability is much wider than the violations that compliance targets. Because of its focus on legal risk, compliance is backwards-looking and remains tethered to statutory and regulatory definitions of appropriate conduct, harm, and liability."). Professors Gadinis and Miazad also express concern that compliance involves the threat of punishment, which can deter cooperation, whereas ESG is "non-confrontational." *See id.* at 1442. Presumably, though, the correct balance of carrots and sticks

encompass the full range of issues that must be addressed for a corporation to operate sustainably.[112] Yet, modern compliance programs are not limited to the proverbial letter of the law and seek to integrate compliance with broader questions of corporate strategy and ethics.[113] Indeed, one of the advantages of this Article's recommended approach is that it harnesses the corporate compliance function as it now exists and uses it to address climate change. Thus, to the extent ESG helps to identify risks that a corporation ought to address, it is fully compatible with compliance.[114]

C. COMPLIANCE REVISITED

To be clear, this Article does not question the value of standard risk-management principles or ESG as resources for addressing climate change. Rather, it contends that compliance is consistent with those efforts and provides a robust framework for implementation. Other scholars contend that corporations that wish to address climate change must "voluntarily move beyond mere compliance."[115] This Article argues that, properly understood, climate change is already a compliance matter.

From the standpoint of "firm-wide compliance risk management,"[116] the need to address climate change is clear. First, today's business risk is tomorrow's legal concern. Without proactive risk management, corporations may be blindsided by legal and regulatory troubles that could have been avoided.[117] Sooner or later, lawmakers will be forced to confront the reality of climate change. As fiduciaries, corporate managers are obligated to address

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will vary depending on the circumstances, and incentive payments for outstanding performance are fully compatible with a compliance approach. *See infra* Section IV.A.3.

112. *See infra* Section IV.A.3.

113. *See* Baer, *supra* note 19, at 958 ("General compliance programs address the overall conduct of business in accordance with prescribed legal, and increasingly ethical and cultural, norms.").

114. As Professors Gadinis and Miazad recognize, "[o]ften, the legal, compliance, and ESG departments work together to advance future policies." Gadinis & Miazad, *supra* note 8, at 1430. Indeed, one could even expand the definition of ESG to include risk management *and* compliance. *See* Pollman, *Corporate Social Responsibility*, *supra* note 94, at 664–66 ("[W]hereas CSR is often framed in terms of social obligations, rooted in ethical or moral concerns, ESG is generally discussed in terms of risk management for firms and investors, individually or systemically."). According to this account, ESG encompasses compliance. *See id.* (noting that ESG "envisions a scope that includes legal compliance as well as additional concerns"). Likewise, though, one might point out that the strategic risk management called for by compliance policies includes the ethical and social concerns that are sometimes labeled ESG. For further discussion of the complementariness of ESG and compliance, see *infra* Section IV.A.3.

115. Sneirson, *supra* note 101, at 993.

116. *See* Miller, *supra* note 14, at 438 (discussing the growing recognition of compliance moving towards "a risk-based approach" while making strategic business decisions).

117. Gadinis & Miazad, *supra* note 8, at 1466 ("When a company's environmental efforts simply try to meet legal limits long decried as inadequate by environmentalists, the company may find itself exposed when these environmentalists are proven right and catastrophe hits."). Likewise, "[w]hen a company's management declines to inquire how female employees are treated in the workplace, it allows pernicious behaviors to flourish." *Id.*

climate change perils that threaten the viability of a corporation's business model.[118] Consequently, to get ahead of predictable regulation, corporate managers should recognize the value in taking proactive measures.[119]

Second, corporate compliance begins with the proverbial "tone at the top" and is not just a set of rules to follow. Compliance has, and is intended to have, normative force and calls for ethical decision making.[120] Thus, even where the law has not yet caught up, corporations should accept the science of climate change and act accordingly. The problem of carbon emissions falls most directly on corporations in the fossil fuel industry, but it also encompasses corporations that use petroleum to manufacture their products, or that tap into supply chains involving the shipment of goods around the world.[121] Container ships are responsible for "2.9 percent of global carbon-dioxide emissions, almost as much as the entire continent of South America."[122] Even seemingly trivial contributions to climate change add up, as when corporations send sales managers out to meet with customers rather than using the telephone or a videoconference.[123] No ethical corporation can ignore its contributions to the climate change crisis.

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118. Benjamin, *supra* note 92, at 368 (arguing that "fiduciary duties as guided by the shareholder wealth maximization norm at the very least require directors to be informed of and take into account the risks of climate change to their businesses").

119. *See* J.R. DeShazo & Jody Freeman, *Timing and Form of Federal Regulation: The Case of Climate Change*, 155 U. PA. L. REV. 1499, 1502 (2007) ("The regulatory burden of addressing climate change will fall most heavily on the transportation and electric power sectors, since they are responsible for most domestic greenhouse gas (GHG) pollution, but will also encompass many other sectors, including manufacturing. Thus, regulation in response to climate change will deeply affect the American economy."). Another possible response to the prospect of new regulation, however, is that corporations will invest in lobbying against those regulations. *See, e.g.*, Hiroko Tabuchi, *Toyota Led on Clean Cars. Now Critics Say It Works to Delay Them*, N.Y. TIMES (July 25, 2021), https://www.nytimes.com/2021/07/25/climate/toyota-electric-hydrogen.html [https://perma.cc/3226-5DC3] (describing "Toyota's worldwide efforts—in markets including the United States, the United Kingdom, the European Union and Australia—to oppose stricter car emissions standards or fight electric vehicle mandates").

120. *See* Benjamin, *supra* note 92, at 364 ("Norms are powerful tools in corporate law. Corporate actors, such as directors, are often influenced by corporate culture and norm-based standards.").

121. The challenge for fossil fuel companies is that carbon emissions are the main source of their profits. Slowing down climate change will require fossil fuel companies to stop their exploration efforts and leave existing oil and gas in the ground. *See* David Roberts, *On Climate Change, Oil and Gas Companies Have a Long Way to Go*, VOX (Sept. 25, 2020, 9:20 AM), https://www.vox.com/energy-and-environment/2020/9/25/21452055/climate-change-exxon-bp-shell-total-chevron-oil-gas [https://perma.cc/67RS-GSRR].

122. Aurora Almendral, *Can Massive Cargo Ships Use Wind to Go Green?*, N.Y. TIMES MAG. (June 28, 2021), https://www.nytimes.com/2021/06/24/magazine/cargo-ships-emissions.html [https://perma.cc/P2G8-SFYU].

123. *See* Robert H. Socolow, *Truths We Must Tell Ourselves to Manage Climate Change*, 65 VAND. L. REV. 1455, 1459 (2012) ("Everyone would rather live on a bigger planet—a planet, say, as large as Jupiter—where our day-to-day activities mattered far less. On *our* planet, however, the insights from climate science reveal that humankind is a powerful agent of undesired change.").

Third, even if the systemic consequences of climate change were not a compliance matter for individual corporations, especially those that are less reliant on fossil fuels, climate change adaptation measures are within each corporation's control.[124] Setting aside concerns about the future, "[t]he impacts of climate change are already affecting companies in terms of increased operational costs, disrupted production, plant shutdowns, worker absences due to extreme events, as well as compromised assets."[125] Regardless of whether (and when) climate change mitigation and adaptation measures may be mandated by law, existing threats trigger a compliance obligation to act to protect physical assets and personnel.[126] For example, a corporation that holds sensitive customer records should maintain duplicate records offsite in case a disaster damages the principal location.[127] Likewise, to address the safety of their employees, corporations in vulnerable regions should ensure that employees receive timely alerts concerning disasters and assistance in evacuating.[128]

Finally, as Elizabeth Pollman has observed, a corporation's commitment to compliance may be an acknowledgment of the existence of a foundational social contract that permits the corporation to exist and enjoy special rights, including a limitation of liability that externalizes certain harms: "Corporations produce a continual flow of externalities; embedding a duty of obedience to laws and regulations that constrain these externalities for the good of society helps to legitimize corporate law."[129] Accordingly, the compliance function may be understood as part of a broader social bargain between corporations and society. If that social contract imposes any obligations on corporations, a duty to address the climate change crisis would be one such obligation.

124. Because climate change is already exacerbating disaster harm, adaptation must be part of the response to climate change, and yet adaptation has not been given enough attention in policy discussions. *See* Jacqueline Peel & Hari M. Osofsky, *Sue to Adapt?*, 99 MINN. L. REV. 2177, 2179 (2015) ("The U.S. debate over climate change has largely focused on . . . reducing U.S. greenhouse gas (GHG) emissions from energy production, transportation, industrial manufacturing, and land sector activities. There has been far less attention paid to the question of adaptation—how governments, businesses, communities and individuals should take action to manage the consequences of a changed climate and to reduce vulnerability to the effects of climate change.").

125. Benjamin, *supra* note 92, at 367.

126. *See* Williams, *supra* note 2, at 1884 (noting that U.S. corporations must take into account the possibility of litigation "stemming from the attribution of climate change to a company's activities or the failure to manage the impacts of climate change on the business").

127. In the wake of Hurricane Katrina, for example, criminal prosecutions were impeded by the loss of evidence from flooded police stations. *See Katrina Causes Chaos in New Orleans Court System*, NPR (Oct. 4, 2005, 12:00 AM), https://www.npr.org/templates/story/story.php?storyId=4944208 [https://perma.cc/R2Y7-WJXP].

128. *See, e.g.*, Amber Colley, *How to Protect Your Business from a Natural Disaster*, DUN & BRADSTREET (Dec. 10, 2019), https://www.dnb.com/perspectives/small-business/how-to-protect-your-business-from-natural-disasters.html [https://perma.cc/ZX3B-MWYP].

129. Pollman, *supra* note 50, at 2028–29.

The specifics of a compliance framework will vary across industries, locations, and the types of disaster most likely to be encountered.[130] Compliance protocols may also vary based on the size of the corporation.[131] For example, large corporations may have more ability to shape supply chain practices by refusing to deal with suppliers unless they agree to sustainability guidelines.[132] At the top of a supply chain, corporations "retain enormous power amounting to de facto operational control."[133] Also, depending on the location of a corporation's physical assets and its line of business, adaptation to certain types of natural hazards may be more pressing in order to protect customers, employees, and investors.[134] Fundamentally, though, climate change mitigation and adaptation should be seen as a compliance obligation for all corporations.

IV. CREATING COMPLIANCE OBLIGATIONS

For climate change to become a compliance obligation, there must be a mechanism to trigger the obligation and define its substantive content. Corporations that choose to take responsibility for climate change have several options at their disposal. Likewise, there are avenues that lawmakers, regulators, investors, and environmental activists can pursue to create compliance obligations when corporate boards fail to do so.

A. Internal Mechanisms

Corporations can define their compliance commitments in several ways. For example, corporations can join private standard-setting associations to create shared obligations applicable to all member firms. Alternatively, especially when dealing with supply chains, corporations can use contracts to create and enforce climate change commitments. ESG initiatives can also be bolstered through integration with compliance metrics—for example, by

130. For example, "[b]ecause insurers play a central role in helping our global economy to manage risk and to make business and personal financial ventures viable, their participation in solving the climate change problem is essential." Sean B. Hecht, *Climate Change and the Transformation of Risk: Insurance Matters*, 55 UCLA L. REV. 1559, 1561 (2008). For insurance companies, measuring the risk of climate change is an existential challenge. *Id*; *see also generally* Howard C. Kunreuther & Erwann O. Michel-Kerjan, *Climate Change, Insurability of Large-Scale Disasters, and the Emerging Liability Challenge*, 155 U. PA. L. REV. 1795 (2007) (discussing the effect of climate change on insurance companies).

131. Porter & Reinhardt, *supra* note 78 ("Each company's approach will depend on its particular business and should mesh with its overall strategy.").

132. *See infra* Section IV.A.2.

133. Nelson Lichtenstein, *Two Cheers for Vertical Integration: Corporate Governance in a World of Global Supply Chains*, *in* CORPORATIONS AND AMERICAN DEMOCRACY 329, 340 (Naomi R. Lamoreaux & William J. Novak eds., 2017).

134. It is, for example, crucial that power companies consider how disasters could impact transmission lines. For consumers, lost electricity is more than an inconvenience. It can be a matter of life and death. *See* Christine Hauser & Edgar Sandoval, *Death Toll from Texas Winter Storm Continues to Rise*, N.Y. TIMES (July 14, 2021), https://www.nytimes.com/2021/07/14/us/texas-winter-storm-deaths.html [https://perma.cc/4BQH-2NJJ].

publishing goals for carbon reduction and tying executive pay to the achievement of those goals. Lastly, to the extent corporate law's prioritization of shareholder interests constrains a corporation's compliance response, social enterprise law offers additional tools for integrating climate change goals into the corporation's mission statement and facilitates a rebalancing of profit and social purpose.

1. Self-Regulatory Organizations

Corporations can band together to form self-regulating communities of interest and then use those ties to create climate change obligations:

> [P]rivate actors—including firms, industry associations, private standard-setting organizations, and other NGOs—play an increasingly important role alongside public regulators in setting and enforcing environmental standards, either as co-regulators or as sources of environmental governance in their own right. These shared governance efforts have been described as "new governance," "collaborative governance," "responsive regulation," and "modular" environmental regulation, among other monikers.[135]

Such collective governance strategies range from the highly formal to the informal. On the formal end of the continuum, stock exchange associations set detailed membership and listing standards for corporations that wish to join.[136] For example, to be listed on the New York Stock Exchange ("NYSE") a corporation must comply with governance mandates including board independence rules and shareholder voting on major asset sales.[137] Thus, opting into the NYSE brings with it an additional set of compliance obligations applicable so long as a corporation is listed on the exchange. The NYSE has a range of sanctions it can apply for violations including suspension and delisting.[138]

Stock exchange rules could be used to push member corporations to address climate change. To that end, the Climate Disclosure Standards Board ("CDSB") has issued a report "proposing corporate climate change reporting

135. Light, *supra* note 6, at 153 (footnotes omitted); *see also* Pollman, *Corporate Social Responsibility*, *supra* note 94, at 668 ("External forms of 'meta-regulation' arise from institutional investors, regulators, NGOs, and other groups that develop schemes that guide, measure, and monitor corporate conduct. This area of 'soft law' and 'private regulation' has become a veritable alphabet soup of acronyms as third-party standards, ratings, and rankings have multiplied.").

136. *See, e.g.*, *NYSE Membership*, NYSE, https://www.nyse.com/markets/nyse/membership [https://perma.cc/QR4B-DBTX]; *U.S. Exchange Membership*, NASDAQ TRADER, http://www.nasdaqtrader.com/Trader.aspx?id=Membership [https://perma.cc/VD23-2LSA].

137. *See* NYSE, NYSE LISTED COMPANY MANUAL § 303A.01 (2009) ("Listed companies must have a majority of independent directors. Effective boards of directors exercise independent judgment in carrying out their responsibilities. Requiring a majority of independent directors will increase the quality of board oversight and lessen the possibility of damaging conflicts of interest.").

138. *See id.* § 801.00.

requirements for adoption or support by stock exchanges . . . to encourage the supply and use of information to strengthen the resilience of markets against climate change disruption."[139] The CDSB states that "[a]s repositories for the rights, rules, mechanisms and systems that shape economic relationships, stock exchanges and their regulators have a powerful role to play in protecting market actors, creating the conditions for clear disclosure and promoting incentives for the development of sustainable practice."[140] In short, stock exchanges can write rules concerning climate change that create compliance obligations for their members.

Self-regulatory organizations with the authority to write binding regulations offer an appealing approach to developing and implementing compliance obligations. By signaling their ability to work jointly for the collective good, corporations may seek to allay the concerns of regulators, shape the content of eventual laws and regulations, and outwit heedless competitors that ignore regulatory concerns in favor of short-term gains.[141] Also, by creating a level playing field, self-regulatory organizations can reduce the collective action problem. If each member corporation knows that all other corporations have agreed to live by the same rules, that will make it easier to adopt climate change mitigation measures that might otherwise be too costly to survive market competition.[142]

Even without binding membership rules to rely upon, corporations can look to nonmandatory guidelines promulgated by industry associations to support standard setting beyond what is required by external laws and regulations. For example, on July 26, 2021, "nearly 60 major medical organizations, including the American Medical Association and the American Nurses Association, called . . . for mandatory vaccination of health care

139. *Developing Climate Resilient Stock Markets*, CLIMATE DISCLOSURE STANDARDS BD., https://www.cdsb.net/what-we-do/policy-work/developing-climate-resilient-stock-markets [https://perma.cc/KUD3-MLRJ]. The CDSB identifies itself as "an international consortium of business and environmental NGOs." *About the Climate Disclosure Standards Board*, CLIMATE DISCLOSURE STANDARDS BD., https://www.cdsb.net/our-story [https://perma.cc/RLJ5-ET52]. For further analysis of the role of disclosure rules in creating compliance obligations, see *infra* Section IV.B.3.

140. *Developing Climate Resilient Stock Markets*, *supra* note 139.

141. The other side of the coin is that industry groups can lobby lawmakers to weaken climate change rules. *See* Tabuchi, *supra* note 119 ("More recently, the Alliance for Automotive Innovation, an industry lobby group, argued in closed-door meetings in Washington that the California compromise, which is expected to be a model for new standards from the Biden administration, is in fact not feasible for all of its members . . . ."). When industry groups take the lead, the role of individual corporations may be obscured. *Id.* (noting that the chairperson of the Alliance for Automotive Innovation is a Toyota government liaison and that "Toyota is promoting itself as strongly backing a green transition, but in effect, it is opposing efforts that others say are crucial to a swift green transition").

142. Industry coordination efforts that effect pricing may raise antitrust concerns, and some scholars have argued that antitrust law needs to be interpreted liberally to facilitate joint efforts to tackle climate change. *See* Light, *supra* note 6, at 171–81.

workers."[143] By banding together and speaking with a single voice, these groups intend to offer support for individual hospitals and health care systems contemplating mandatory vaccination rules.[144]

Seeking to create a similar sense of shared obligation, the Business Roundtable, an influential group comprised of CEOs, issued a statement on climate change in September 2020, stating that "corporations should lead by example, support sound public policies and drive the innovation needed to address climate change."[145] According to the World Resources Institute, the principles set forth in the Business Roundtable statement had real value: "[T]hey represent a good understanding of the policy portfolio needed to address climate change, explicitly endorse a price on carbon and break away from oppositional climate positioning that was common before the results of the 2020 election."[146] Because the Business Roundtable statement is not self-enforcing, however, it remains unclear what action individual corporations will take in response.[147]

2. Supply Chain Contracts

Contracts are another tool available for creating compliance obligations and can be used to ensure that economic exchanges incorporate climate change protocols and other sustainability measures. Unlike ESG commitments standing alone, contracts are a matter of private law. That is, once entered, a

143. Emily Anthes, *Medical Groups Call for Mandatory Vaccination of U.S. Health Care Workers*, N.Y. TIMES (July 26, 2021), https://www.nytimes.com/2021/07/26/health/health-care-workers-vaccine-requirement.html [https://perma.cc/6CM7-UZC4]. Signatories included "a wide array of professional associations, including those representing doctors, nurses, pharmacists and infectious disease experts." *Id.*

144. *See id.* (noting opposition to COVID-19 vaccines and that "just 58.7 percent of nursing home employees have been fully vaccinated, according to the Centers for Disease Control and Prevention"). The joint statement provides the rationale for insisting upon vaccinations: "This is the logical fulfillment of the ethical commitment of all health care workers to put patients as well as residents of long-term care facilities first and take all steps necessary to ensure their health and well-being." *Id.*

145. BUS. ROUNDTABLE, ADDRESSING CLIMATE CHANGE 1 (2020), https://s3.amazonaws.com/brt.org/Business-RoundtableAddressingClimateChangeReport.September2020.pdf [https://perma.cc/J24Q-4ULD]. The Business Roundtable statement, while nonbinding, is an example of collective goal setting. *See id.* The group had previously declared that corporate interests need to be aligned with societal interests. *Business Roundtable Redefines the Purpose of a Corporation to Promote 'An Economy That Serves All Americans'*, BUS. ROUNDTABLE (Aug. 19, 2019), https://www.businessroundtable.org/business-roundtable-redefines-the-purpose-of-a-corporation-to-promote-an-economy-that-serves-all-americans [https://perma.cc/55GV-QY33].

146. Amy Meyer & Jillian Neuberger, *Trade Associations Speak on Carbon Pricing. Will Action Follow?*, WORLD RES. INST. (Apr. 12, 2021), https://www.wri.org/insights/trade-associations-speak-carbon-pricing-will-action-follow [https://perma.cc/48UA-7S2N].

147. *See id.* (describing a helpful evolution of industry groups from opposition to carbon pricing and other mitigation measures to ostensible support but noting that there is more work to do—"for improved public positions to have real meaning, trade associations must put their political and financial muscle behind these statements").

contract is a legal document enforceable in court.[148] As such, contracts are capable of filling gaps in existing environmental law:

> Scholars have . . . identified the important phenomenon of environmental "contracts," which include not only "second-order agreements"—in which private firms allocate responsibility for compliance with public environmental law among themselves "in the shadow" of public regulation—but also supply-chain contract terms requiring environmental performance.[149]

By adapting contractual terms to handle environmental concerns, corporations can become "active participants in setting and enforcing environmental standards."[150] Contracts give ESG commitments legal teeth.

Contract law is particularly useful as a tool for extending a corporation's values across its supply chain.[151] Without some method for overseeing supply chains, it would be impossible to ensure that a corporation's products were made in a sustainable fashion.[152] According to one estimate, "[g]lobal supply chains power 80% of world trade, 60% of global production, and sustain over 450 million jobs."[153] One concern about supply chains is that a consumer-facing corporation can hide human rights violations and environmental degradation when it is irresponsible about how it sources its products.[154] By using independent businesses to acquire materials, "businesses could focus on the bottom line without much concern for how it was achieved."[155] However,

148. To be clear, a contract is a tool for creating private obligations and does not nullify questions about whether those obligations are permissible. Corporate managers could not, for instance, evade the constraints of shareholder primacy simply by signing contracts that prioritize the interests of other stakeholders.

149. Light, *supra* note 6, at 154. *See* Michael P. Vandenbergh, *The New Wal-Mart Effect: The Role of Private Contracting in Global Governance*, 54 UCLA L. REV. 913, 961–62 (2007).

150. Light, *supra* note 6, at 155.

151. *See* Pollman, *Corporate Social Responsibility*, *supra* note 94, at 668 ("Supply chain assurance extends the corporation's voluntarily adopted principles into its external contracts through private ordering, requiring suppliers to use international business norms and standards of human rights, labor protection, and social responsibility, or otherwise providing incentives to do so.").

152. *See* Kishanthi Parella, *Improving Human Rights Compliance in Supply Chains*, 95 NOTRE DAME L. REV. 727, 729 (2019) (explaining that smart phones, sneakers, and many other familiar consumer "products are sourced, manufactured, assembled, transported, distributed, warehoused, marketed, and sold by several different companies, often in several parts of the world").

153. Robert C. Bird & Vivek Soundararajan, *From Suspicion to Sustainability in Global Supply Chains*, 7 TEX. A&M L. REV. 383, 384 (2020).

154. *Id.* (explaining that, too often, "[w]orkers are subjected to dangerous working conditions, weak labor rights, violence, and torture"); Steph Tai, *Food Sustainability in the Age of Complex, Global Supply Chains*, 71 ARK. L. REV. 465, 468 (2018) (noting the problem of "lack of accountability within private supply chains").

155. Susan S. Kuo & Benjamin Means, *The Political Economy of Corporate Exit*, 71 VAND. L. REV. 1293, 1313 (2018).

if corporations can turn a blind eye to supply chain misconduct, they can also use their purchasing power to regulate the supply chain.[156]

Contract is a key component of supply chain management because it sets the standards and the consequences for noncompliance. For example, McDonald's launched its Animal Health & Welfare initiative, in partnership with a number of industry associations, to leverage its economic power to improve food safety and to ensure more humane conditions for animals.[157] In a section titled "Ensuring Supply Chain Compliance," McDonald's outlines its oversight mechanisms:

> Our animal health and welfare expectations for all suppliers are defined in our Global Raw Material Sponsorship Program and further outlined in our Global Sustainable Sourcing Guide, as well as being embedded in our product Quality System Specifications. Our global and market Quality Systems teams are in frequent contact with our suppliers, reviewing their performance to ensure policies are properly implemented and consistently met.[158]

With respect to the beef used in McDonald's hamburgers, the corporation states, "we've collaborated with farmers and ranchers who have shown us it's possible to produce beef in a way that protects and maintains native landscapes . . . and sequesters carbon in soils while supporting farmer livelihoods for the long term."[159] Thus, supply chain contracts can build in environmental protections including climate chain mitigation measures.

Whether McDonald's self-reporting overstates its commitment to sustainability,[160] it is useful for our purposes because it illustrates how supply

156. *See* CIARA TORRES-SPELLISCY, CORPORATE CITIZEN? AN ARGUMENT FOR THE SEPARATION OF CORPORATION AND STATE 211 (2016) ("Walmart has done more than the Oslo Accords to improve environmental conditions in China by saying to their manufacturers to up their game or else we won't buy from you anymore." (quoting Interview with Nell Minow, Vice Chair, ValueEdge Advisors (Aug. 19, 2015))).

157. *Animal Health & Welfare*, MCDONALD'S, https://corporate.mcdonalds.com/corpmcd/our-purpose-and-impact/food-quality-and-sourcing/animal-health-and-welfare.html [https://perma.cc/4X6E-9B7U] ("By using our size and global reach, we are helping to drive positive change, ensuring the chicken, eggs, beef and pork we source come from producers who share our commitment to animal health and welfare.").

158. *Id.*

159. *Sustainable Agriculture & Beef*, MCDONALD'S, https://corporate.mcdonalds.com/corpmcd/our-purpose-and-impact/our-planet/sustainable-agriculture.html [https://perma.cc/DHK9-U72G].

160. *See* Tai, *supra* note 154, at 470 (noting that corporate sustainability initiatives "can raise concerns of 'greenwashing,' a term used 'to describe the deceptive use of "green marketing" to promote a misleading perception that a company's policies, practices, products or services are environmentally friendly'"); *What's Wrong With McDonald's?*, ANIMAL EQUAL. (June 25, 2019), https://animalequality.org/blog/2019/06/25/mcdonalds-chicken-cruelty [https://perma.cc/LB5F-Z55E] ("If you were a chicken, Ronald McDonald would represent the devil and the golden arches would be Hell on Earth."). The author asserts that "in the United States, McDonald's is one of the worst culprits when it comes to the suffering of animals in its supply chain," but does

chain contracts can create meaningful compliance obligations.[161] McDonald's explanation of its collaborative approach in managing suppliers further shows that supply chain contracts are not self-enforcing and require oversight to function properly. In other words, supply chain contracts create enforceable obligations but should not be confused with the compliance framework they presuppose.

3. Reinforcing ESG Commitments

ESG commitments "are distinct from actions taken in response to a legal or contractual obligation."[162] For this reason, they are not binding and may falter if asked to bear the full load of a corporation's climate change mitigation efforts.[163] However, ESG and compliance are complementary mechanisms and corporations can build compliance obligations around ESG commitments by setting specific performance targets, incentivizing personnel to meet those targets, and making appropriate public disclosures.[164] Through these methods, an ESG commitment can be translated into carefully defined rules and procedures that lend themselves to compliance oversight.[165]

For example, corporate executives are traditionally compensated based on financial performance metrics, not climate change.[166] In "December 2018, [however,] Shell [became] the first major extractive company to incorporate a carbon emissions reduction measure into its executive compensation,

not address the Animal Health & Welfare plan or whether the corporation's representations concerning supply chain improvements are accurate. *Id.*

161. Bird & Soundararajan, *supra* note 153, at 385 ("[S]ustainability problems are managed through negotiation and enforcement of agreements, prepared outcomes for unexpected events, and relying on formal institutions as a backdrop for performance."). Although contract law can define obligations, "[s]uppliers often reside in jurisdictions where contract enforcement is corrupt, weak, or absent." *Id.*

162. Gadinis & Miazad, *supra* note 8, at 1416.

163. *See supra* Section III.B.

164. Corporations, having set their own standards, may then adopt compliance procedures to meet those standards. *See* Pollman, *Corporate Social Responsibility*, *supra* note 94, at 667–68 ("Finally, CSR and ESG intersect with 'compliance' in another meaning of the term—rather than focusing on legal obedience and related risks, a separate inquiry looks into what standards or metrics companies that claim to have CSR and ESG aims are trying to comply with or meet.").

165. For a different argument in favor of integrating compliance and ESG, see Leo E. Strine, Jr., Kirby M. Smith & Reilly S. Steel, Caremark *and ESG, Perfect Together: A Practical Approach to Implementing an Integrated, Efficient, and Effective* Caremark *and EESG Strategy*, 106 IOWA L. REV. 1885, 1888 (2021) (arguing that ESG—referred to by the authors as EESG—is a prophylactic method of ensuring adequate compliance: "By aiming for higher standards of conduct than the law mandates, corporations should at least do what is legally required").

166. *See* Gadinis & Miazad, *supra* note 8, at 1420 ("Just two years ago, Shell was fending off pressure from shareholders to tie executive compensation to carbon emissions reduction goals."). Indeed, "Shell's general counsel even went so far as to state that it would be 'foolhardy' to expose the company to legal challenges, implying that introducing factors other than stock performance into the compensation calculus may be precluded by the shareholder primacy principle." *Id.* (footnote omitted).

prompting similar moves by London-based BP and France's Total."[167] The U.S. company Chevron has since followed suit.[168] Although the climate change goals are set internally and could be modified without legal consequence, carbon-incentive programs draw heavily upon existing procedures for compliance frameworks; They match rhetoric with specific objectives and a pathway to achieve those objectives.

Moreover, voluntary commitments can trigger other compliance obligations when formalized through public disclosure. For example, on June 9, 2021, Tyson Foods announced that it would seek "to achieve net-zero greenhouse gas (GHG) emissions across its global operations and supply chain by 2050."[169]

Tyson Foods has not taken on any specific legal obligations, but honoring its public commitment will necessarily entail a massive internal compliance initiative. Tyson Foods is "a global organization with 239 facilities and 139,000 employees worldwide" and intends to target "emissions tied to direct global operations, energy sources and throughout the company's supply chain."[170] Notably, if Tyson Foods decided to renege on its emissions targets, it would likely be required to make embarrassing revisions to its previous public disclosures to avoid liability for securities fraud.[171] Although it was careful not to make a binding promise, Tyson Foods may have welcomed the lock-in effect created by its public disclosure, which made the net-zero commitment credible.

Thus, when defenders of an ESG approach admit the "new wave of thinking on compliance centers around corporate culture as the defining element of effectiveness,"[172] but maintain that ESG is a superior approach, they separate ESG from the compliance apparatus that lends it strength. Arguments in favor of ESG include: (1) that ESG is better at gathering information from external stakeholders; and (2) that ESG will have greater "legitimacy" from the public's perspective.[173] These arguments are not convincing. First, at least with respect to climate change, information gathering does not seem to be the main issue—the need to drastically reduce carbon

167. *Id.* (footnote omitted).

168. *See id.*

169. *Tyson Foods Targets 2050 to Achieve Net Zero Greenhouse Gas Emissions*, TYSON FOODS (June 9, 2021), https://www.tysonfoods.com/news/news-releases/2021/6/tyson-foods-targets-2050-achieve-net-zero-greenhouse-gas-emissions [https://perma.cc/GG3E-5ELB].

170. *Id.* (listing priorities including renewable energy, land stewardship, managing supply chains, and working with "advocacy groups such as the Net Zero Business Alliance").

171. That is, Tyson Foods would want to avoid lawsuits alleging that the plaintiffs bought or sold Tyson Foods securities based on public statements concerning climate change that were both false and material to the investment decision.

172. Gadinis & Miazad, *supra* note 8, at 1468.

173. *Id.* at 1470.

emissions could hardly be clearer.[174] In 2015, nearly 200 nations pledged "to hold the increase in the global average temperature to [well] below 2 °C."[175] Meeting that goal will require a radical transition of the global economy and with scant time to spare. Second, when ESG commitments are translated into compliance obligations, they do not thereby become less compelling. In sum, ESG and compliance efforts should be seen as complementary methods of achieving the same goal—mitigating climate change.

4. Social Enterprise Law

This Article focuses on the creation of compliance obligations concerning climate change in the context of large, public corporations like McDonald's, ExxonMobil, and Tyson Foods.[176] Their directors and officers owe fiduciary duties to the corporation and its shareholders. Although the business judgment rule gives directors and officers wide discretion to decide what course to pursue, the perceived strength of "the shareholder wealth maximization standard" creates "an ill-defined legal risk" whenever a corporation appears to elevate purpose over profit.[177]

Even corporations that develop a reputation for socially responsible conduct may find it difficult to live up to their brand when it conflicts with the need to earn profits for shareholders. For example, a recent *New York Times* exposé revealed that Toyota, the car manufacturer that developed the Prius and had long led the effort for cleaner automobiles, was behind lobbying efforts to delay climate change laws and regulations that would speed the transition to electric vehicles.[178] Toyota was developing a different technology and would be at a competitive disadvantage if electric cars took over the market before it could adjust.[179]

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174. Admittedly, it may not always be clear how an individual company affects climate change and how it could most effectively improve its operations. More specific and detailed information may be necessary for effective action.

175. Framework Convention on Climate Change, *Adoption of the Paris Agreement*, ¶ 17, U.N. Doc. FCCC/CP/2015/L.9/Rev.1 (Dec. 12, 2015).

176. Even among those three corporations, there is a significant difference: Tyson Foods is a third-generation, family-controlled business. Although it has public shareholders and attendant fiduciary obligations, business strategy at Tyson Foods is largely determined by the Tyson family and may be less tied to quarterly returns. *See* Means, *supra* note 102, at 918 (arguing that conventional accounts of controlled companies miss the importance of "stewardship—the sense that control comes with obligations to the business, to one's own family, to employees, and to community").

177. Anne M. Tucker, *Impact Investment and Alternative Capital Channels: Funding Social Enterprise Success and Scale*, *in* THE CAMBRIDGE HANDBOOK OF SOCIAL ENTERPRISE LAW 173, 176–77 (Benjamin Means & Joseph W. Yockey eds., 2018).

178. *See* Tabuchi, *supra* note 119.

179. *See id.* (reporting Toyota's apparent "business quandary: Even as other automakers have embraced electric cars, Toyota bet its future on the development of hydrogen fuel cells—a costlier technology that has fallen far behind electric batteries—with greater use of hybrids in the near term"). Consequently, "a rapid shift from gasoline to electric on the roads could be devastating for the company's market share and bottom line." *Id.* In relating this example, we do

The sale of the politically progressive, Vermont-based Ben & Jerry's Ice Cream to the global conglomerate Unilever is another example of the limits of social purpose in a for-profit corporation.[180] Board members later explained, "[w]e did not want to sell the business . . . . But we were a public company, and the board of directors' primary responsibility is the interest of the shareholders."[181] Although Unilever indicated that it would protect the Ben & Jerry's culture, the sale went through with no guarantees that the company's progressive commitments would survive the change in ownership.[182]

To the extent the measures needed to address climate change cannot be reconciled with shareholder profits, social enterprise forms may offer an alternative. In many jurisdictions, social entrepreneurs can "adopt a form of business organization that explicitly authorizes managers to prioritize public welfare while also returning profits to private investors."[183] Depending on the jurisdiction, available options may include "the low-profit limited liability company, the benefit corporation, the benefit LLC, the flexible purpose corporation, and the social-purpose corporation."[184] Each of these forms of business association is meant to make it easier for social entrepreneurs who hope to harness the engine of private enterprise to meet social or environmental goals.[185]

Even if an alternative form of business association affords managers more flexibility to seek social purposes alongside profits, there would still be a need to create robust compliance obligations to lock-in climate change mitigation goals. As Professor Dana Brakman Reiser explains:

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not mean to suggest that Toyota's current position is necessarily insincere. Toyota might reasonably believe that its hydrogen fuel cell technology is a better approach, that hybrid vehicles are an appropriate bridge technology, and that the push for electric cars is "more political showmanship than sound planning." *Id.* (internal quotation marks omitted).

180. *See* Tucker, *supra* note 177, at 177. *But see* Antony Page & Robert A. Katz, *Freezing Out Ben & Jerry: Corporate Law and the Sale of a Social Enterprise Icon*, 35 VT. L. REV. 211, 213 (2010) (explaining that while socially conscious for-profits face fundamental challenges, Ben & Jerry's board could have "test[ed] the company's anti-takeover defenses" without exposing themselves to liability).

181. Tucker, *supra* note 177, at 177.

182. *See id.* (stating that Ben & Jerry's "demonstrated its commitment to purpose through sustainable products, environmental conservation, supporting employees with a living wage and benefits, and significant charitable donations"). In fairness to Unilever, it should be noted that the company has made a number of strong commitments to serve the public interest. *See, e.g.*, *Unilever Sets Out New Actions to Fight Climate Change, and Protect and Regenerate Nature, to Preserve Resources for Future Generations*, UNILEVER, https://www.unilever.com/news/press-releases/2020/unilever-sets-out-new-actions-to-fight-climate-change-and-protect-and-regenerate-nature-to-preserve-resources-for-future-generations.html [https://perma.cc/K9VP-7TM6] (stating that the company will achieve "[n]et [z]ero emissions from all . . . products by 2039").

183. Benjamin Means & Joseph W. Yockey, *Introduction* to THE CAMBRIDGE HANDBOOK OF SOCIAL ENTERPRISE LAW, *supra* note 177, at 1, 1.

184. Dana Brakman Reiser, *Theorizing Forms for Social Enterprise*, 62 EMORY L.J. 681, 683 (2013).

185. *See* Means & Yockey, *supra* note 183, at 1.

> Social entrepreneurs say they will make . . . decisions in a way different than traditional for-profit or nonprofit entities. But, for adoption of a specialized legal form to indicate that an entity actually is different, it must impose a new and unambiguous baseline standard and provide for its reliable enforcement.[186]

A full discussion of social enterprise law is beyond the scope of this Article, but it should be kept in mind that the corporation is not the only possible choice of entity form. If climate change mitigation is beyond the capacity of the corporate form as it now exists, one possibility is corporate reform. Another possibility is for investors and entrepreneurs to migrate to other forms of business association.[187]

B. *External Mechanisms*

If corporations decline to take responsibility for climate change, the most obvious route to creating a compliance obligation is through lawmaking. Assuming that a Green New Deal is unlikely to gain traction at the national level, there is still room under existing delegated authority for agencies to act (e.g., by creating new disclosure requirements). State and local lawmakers may also set standards within their own jurisdictions. Although a corporation's business decisions are the province of the directors and officers, shareholders and other stakeholders can also apply pressure by lowering the stock price, raising the cost of capital, or, in extreme circumstances, launching proxy battles for control of the corporation.[188]

1. State Environmental Law

The surest mechanism for creating a compliance obligation is to enact a statute or promulgate a rule. Compliance is, of course, a corollary of whatever the law requires.[189] For example, coal mining is inherently dangerous, but U.S. coal operations are far safer than coal mines in many other countries,

186. Brakman Reiser, *supra* note 184, at 684.

187. The short timeframe for mitigating climate change suggests that both avenues will need to be pursued simultaneously. There is, for example, no realistic pathway for converting ExxonMobil into a benefit corporation.

188. *See, e.g.*, Harper Ho, *supra* note 23, at 653 (making "the business case for risk-related activism"); Stephen M. Bainbridge, Response, *Director Primacy and Shareholder Disempowerment*, 119 HARV. L. REV. 1735, 1736 (2006) ("If [a corporation's] governance terms are unfavorable, investors will discount the price they are willing to pay for that firm's securities. As a result, the firm's cost of capital rises, leaving it, inter alia, more vulnerable to bankruptcy or hostile takeover."). Although legal scholars aligned with the law and economics movement generally assume that shareholders will prioritize governance terms designed to maximize a corporation's profits, the same price mechanism would permit those with other values to incentivize corporations in a different direction. Current research indicates that "over a quarter of global assets under management are now invested based on the company's environmental and social profile, not just its earnings." Gadinis & Miazad, *supra* note 8, at 1404.

189. *See* Baer, *supra* note 19, at 958.

demonstrating the effectiveness of a compliance regime dictated by comprehensive federal law and regulation.[190]

New federal environmental laws targeting climate change will be difficult to enact in our era of divided and polarized government, but states and local governments will sometimes have more room to maneuver.[191] State "[r]egulation in response to climate change is a good example—perhaps the best in recent years—of states assuming a leadership role to address a social problem while the federal government remains inert."[192] For example, by setting emissions caps, California has spurred innovation in automobile design, leading to breakthroughs that would have been considered impossible a decade ago.[193]

Politics at the state level can be just as messy as at the federal level, however, and there can be no assurances that state lawmakers will accomplish what federal lawmakers cannot. In 2018, for example, Colorado's legislature enacted a Climate Action Plan to reduce greenhouse gas emissions, describing its overall objective as follows:

> Colorado shall strive to increase renewable energy generation and eliminate statewide greenhouse gas pollution by the middle of the twenty-first century and have goals of achieving, at a minimum, a twenty-six-percent reduction in statewide greenhouse gas pollution by 2025, a fifty-percent reduction in statewide greenhouse gas

190. The Mine Safety and Health Administration, acting under authority delegated to it by the Federal Mine Safety and Health Act, has mandated an elaborate system of compliance to ensure the safety of mining operations, including "immediate notification by the mine operator of accidents, injuries and illnesses at the mine; training programs that meet the requirements of the Mine Act; and obtaining approval for certain equipment used in gassy underground mines." *Mine Safety and Health*, U.S. DEP'T OF LAB., https://www.dol.gov/general/topic/safety-health/mining [https://perma.cc/H53M-9WB2].

191. *See* Benjamin, *supra* note 92, at 346 n.166 (noting that "regulatory action is occurring at the state and local levels" and listing examples from Oregon, North Carolina, Colorado, and California); Kirsten H. Engel & Barak Y. Orbach, *Micro-Motives and State and Local Climate Change Initiatives*, 2 HARV. L. & POL'Y REV. 119, 122 (2008) (suggesting "that the number and diversity of local climate change initiatives indicate that, despite their net costs, such initiatives are popular with voters and politicians").

192. DeShazo & Freeman, *supra* note 119, at 1500.

193. *See* David Roberts, *California Has a Climate Problem, and Its Name Is Cars*, VOX (Aug. 22, 2017, 1:30 PM), https://www.vox.com/energy-and-environment/2017/8/22/16177820/california-transportation [https://perma.cc/5RJ5-Z66W] ("In 2006, California passed its groundbreaking climate legislation AB 32, which put in place a target for greenhouse gas reductions and set in motion a cascade of regulations, subsidies, and performance standards that has continued unabated ever since."). California continues to push for emissions reductions. *See* Press Release, Governor Gavin Newsom, Governor Newsom Announces California Will Phase Out Gasoline-Powered Cars & Drastically Reduce Demand for Fossil Fuel in California's Fight Against Climate Change (Sept. 23, 2020), https://www.gov.ca.gov/2020/09/23/governor-newsom-announces-california-will-phase-out-gasoline-powered-cars-drastically-reduce-demand-for-fossil-fuel-in-californias-fight-against-climate-change [https://perma.cc/Q8ZP-44Q4].

pollution by 2030, and a ninety-percent reduction in statewide greenhouse gas pollution by 2050.[194]

Yet lawmakers have not been able to finalize an enforcement plan that would create any specific compliance obligations.[195]

Indeed, Colorado's governor recently indicated that "he would veto a bill backed by fellow Democrats that is designed to enforce, through additional regulation, a state plan to cut greenhouse gas emissions to combat climate change."[196] Governor Polis expressed concern with the level of "dictatorial" authority the bill would give an unelected board and indicated that he would prefer a more collaborative approach with industry, environmental activists, and other stakeholders.[197] The proponents of the law do not have the votes to override a veto.[198]

Also, a patchwork of state environmental laws could create other problems. For example, corporations subject to differing legal standards in multiple jurisdictions would incur increased compliance costs, unless they decided to meet the most stringent applicable standard regardless of location.[199]

The prospect of regulation at the state, local, and possibly municipal level could motivate corporations to support national legislation, which could help

194. *See* H.B. 19-1261, 2019 Gen. Assemb., Reg. Sess. (Colo. 2019) (amending COLO. REV. STAT. § 25-7-102 (2007)).

195. *See* Chase Woodruff, *Polis Administration Faces Second Lawsuit over Delayed Climate Regulations*, COLO. NEWSLINE (Aug. 17, 2020, 6:01 AM), https://coloradonewsline.com/2020/08/17/polis-administration-faces-second-lawsuit-over-delayed-climate-regulations [https://perma.cc/9JDS-QCW6] (describing litigation brought by environmental groups alleging "that regulators violated state law by failing to propose a comprehensive set of greenhouse-gas rules before a July 1 deadline").

196. *Colorado Governor Says He Would Veto Climate Change Bill*, AP NEWS (Apr. 28, 2021), https://apnews.com/article/colorado-bills-climate-climate-change-74b949bd233d459d35564f0ad525d404a [https://perma.cc/CMS6-YQB8] ("The wide-ranging bill, sponsored by Sens. Faith Winter and Dominick Moreno and Rep. Dominique Jackson, would direct the state Air Quality Control Commission to enact regulations to enforce the reduction of carbon emissions called for in the plan.").

197. *See id.*

198. *See id.*

199. In the absence of national legislation, California's environmental laws have set the standard for car emissions. *See* Coral Davenport, *Biden Restores California's Power to Set Stringent Tailpipe Rules*, N.Y. TIMES (Mar. 9, 2022), https://www.nytimes.com/2022/03/09/climate/biden-california-tailpipe-waiver.html [https://perma.cc/S7JS-66VR] ("As the most populous state, and with the world's fifth-largest economy, California has been able to influence automobile makers and set the pace for the rest of the country.").

break the current political impasse.[200] Alternatively, corporations might sue to challenge the right of individual states to set de facto national policy.[201]

State environmental legislation is not a perfect substitute for federal action. Notably, to the extent jurisdictions compete for corporate business, state environmental laws can be undermined by corporations' ability to pick and choose where they operate. For example, Tesla recently conducted "a bidding war among seven states" to decide where it would locate a planned "gigafactory."[202] Even more recently, Tesla's controlling owner, Elon Musk, declared his intention to move Tesla's existing operations out of California, apparently because he was unhappy with how California was enforcing its COVID-19 rules.[203]

2. Securities Law Disclosures

Even if it is not possible to regulate corporate contributions to climate change directly through changes to environmental law, activists can push for the disclosure of climate-specific risks. This approach is consistent with existing securities law. That is, instead of regulating the substance of securities offerings, federal law focuses largely on information—making sure that investors have adequate knowledge of an issuer's business to make an intelligent decision whether to buy, sell, or hold its stock.[204] Accordingly, to avoid civil and criminal sanctions, corporations know that they must disclose all material risks.[205]

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200. This is not a new idea, however, which suggests that the incentive structure is not very strong, or that the state and local environmental lawmaking have not created undue difficulty for corporations. *See* Robert N. Stavins, *A Meaningful U.S. Cap-and-Trade System to Address Climate Change*, 32 HARV. ENV'T L. REV. 293, 295 (2008) ("Partly in response to fears of a fractured set of regional policies, an increasing number of large corporations, acting individually or in coalitions, together with environmental advocacy groups, have announced their support for serious national action.").

201. *See* Klass & Pai, *supra* note 6, at 738 (describing litigation involving coal and other energy exports). In order to export coal, corporations need to construct export terminals, but many "coastal states have refused to grant the permits and other approvals required to build these projects, leading both the coal industry and states with significant coal resources to file lawsuits against them." *Id.* The lawsuits allege violations of the dormant Commerce Clause. *Id.* Although not yet adjudicated by the U.S. Supreme Court, California's fuel standards have so far survived similar challenges. *See* Rocky Mountain Farmers Union v. Corey, 913 F.3d 940, 958 (9th Cir. 2019).

202. Kuo & Means, *supra* note 155, at 1305.

203. *See* Ian Spiegelman, *Elon Musk Says He Lives in Texas Now Because of California's 'Complacence'*, L.A. MAG. (Dec. 9, 2020), https://www.lamag.com/citythinkblog/elon-musk-texas [https://perma.cc/Y4YK-GQDY] ("When authorities in Alameda forced him to shut down his Fremont factory in May for failing to follow COVID-19 protocols, he quickly took it upon himself to reopen without permission, which then led to several workers testing positive for the virus.").

204. *See* BAINBRIDGE, *supra* note 22, at 80 ("The Securities Act has two principal goals: assuring adequate disclosure of material information to investors and preventing fraud.").

205. In addition to enforcement by the SEC and the Department of Justice, corporations may also be sued by shareholders under the antifraud provisions of Securities Exchange Act § 10(b) and Rule 10b-5. *See* 15 U.S.C. § 78j (2018); 17 C.F.R. § 240.10b–5 (2021).

To the extent climate change creates a material business risk that investors would want to know about before deciding whether to buy or sell stock, the federal securities laws compel corporations to make adequate disclosures of those risks.[206]

When it is not clear what best practices would require, or if political constraints make intervention difficult, mandatory reporting is an attractive alternative to top-down legislation. Although disclosure requirements may be burdensome for corporations and should not be imposed without careful consideration, they are a more modest intervention than direct substantive regulation. In the context of climate change, for example, it is one thing to set specific emissions standards for coal plants and quite another to determine the right level of carbon emissions for every form of economic activity.[207]

Also, a disclosure regime necessarily shifts climate change from corporate risk management to compliance because corporations must investigate their own activities, report them on an annual basis, and monitor changes. For example, given the stakes, a corporation would want to have a very clear process for determining when climate change risks are material. Without mandating substantive results, the law can require corporations to begin to internalize the problem of climate change.[208] If a corporation discloses poor results, and especially if they fall below industry norms, the obligation to disclose accurate facts about the corporation's contributions to climate change can incentivize the corporation to do better.[209]

Tracking the success of the Environmental Protection Agency ("EPA") disclosure rules concerning toxic chemicals, the Toxics Release Inventory ("TRI"), demonstrates how disclosure rules can prompt a corporation to make substantive changes:

> [The TRI] program, which requires certain firms to file public annual reports regarding their use and release of listed toxic

206. *See* Pollman, *Corporate Social Responsibility*, *supra* note 94, at 669 ("In the United States, federal securities regulation requires public companies to disclose 'material' risk-related information, and the SEC has recognized that material ESG risks such as related to climate change must be disclosed under standard reporting requirements.").

207. Carbon taxes and so-called "cap and trade" laws offer elegant economic solutions to this problem, because they: (1) force corporations to internalize the costs of their activities; and (2) create a market in which corporations can buy and sell pollution credits, thereby improving allocative efficiency while driving down carbon emissions. *See, e.g.*, Stavins, *supra* note 200, at 296 (arguing that "[w]hile there are tradeoffs between two alternative market-based instruments—a cap-and-trade system and a carbon tax—the best approach for the short- to medium-term in the United States is a cap-and-trade system").

208. *See, e.g.*, RICHARD H. THALER & CASS R. SUNSTEIN, NUDGE: IMPROVING DECISIONS ABOUT HEALTH, WEALTH, AND HAPPINESS 188–96 (2008) (describing how environmental disclosures can create the impetus for substantive reform).

209. *See* Light, *supra* note 6, at 149 ("Stronger mandates in securities regulation to disclose environmental risks, even in the absence of a showing of financial materiality, could shed clearer light on firms' environmental decisionmaking, with the potential to provide incentives for more positive environmental behavior.").

> chemicals, has coincided with a dramatic reduction in the use of those chemicals and their release into the environment. These reductions have occurred through a combination of self-monitoring by firms and external monitoring of firm actions by the public, regulators, investors, and peers. Publicly traded firms have faced secondary implications of TRI reporting, including drops in stock prices and increases in borrowing and insurance costs.[210]

Thus, where stakeholders expect corporations to meet sustainability standards, disclosure can provide the necessary catalyst for change.[211]

Failures to disclose can be investigated and sanctioned as compliance failures. For example, the SEC investigated ExxonMobil in 2016 concerning "whether the firm's securities disclosures adequately addressed the material risks of climate change to its business, in particular with respect to how the firm valued its oil reserve assets."[212] The key issue was whether ExxonMobil was deceiving shareholders concerning the risk of "stranded" assets—oil in the ground that future environmental regulations might prevent the company from ever pumping and selling.[213] Ultimately, ExxonMobil resolved the SEC investigation by agreeing "to reduce its estimate of recoverable reserves in a subsequent . . . filing by more than three billion barrels of oil equivalent, including 'de-booking' all the reserves it held in a Canadian oil sands project."[214]

3. Climate Change Disclosures

Several scholars have recommended that the SEC create a stricter system of mandatory disclosures concerning climate change and other sustainability issues.[215] In this regard, the SEC is currently considering revising corporate disclosure rules to highlight the problem of climate change and the extent to which corporations are taking steps to address it.[216] On February 24, 2021, Acting Chair Allison Herren Lee issued a statement explaining that she had asked the SEC Division of Corporation Finance "to enhance its focus on

210. *Id.* at 167 (footnotes omitted).

211. *See id.* at 166–67 ("While informational regulation mandates the disclosure of information, it has the secondary benefit of providing incentives to those disclosing that information to change their behavior." (emphasis omitted)).

212. *Id.* at 167.

213. *Id.* at 167–68 (noting that the SEC's involvement "mirrored an earlier, separate inquiry by the New York Attorney General").

214. *Id.* at 168.

215. *See, e.g.*, Jill E. Fisch, *Making Sustainability Disclosure Sustainable*, 107 GEO. L.J. 923, 952–56 (2019); Ann M. Lipton, *Not Everything Is About Investors: The Case for Mandatory Stakeholder Disclosure*, 37 YALE J. ON REGUL. 499, 561–64 (2020); Cynthia A. Williams, *The Securities and Exchange Commission and Corporate Social Transparency*, 112 HARV. L. REV. 1197, 1273–75 (1999).

216. The SEC previously issued interpretive guidance concerning climate change disclosures in 2010. *See* Commission Guidance Regarding Disclosure Related to Climate Change, 17 C.F.R. pts. 211, 231, 241 (2010), https://www.govinfo.gov/content/pkg/FR-2010-02-08/pdf/2010-2602.pdf [https://perma.cc/7JYJ-Q2MP].

climate-related disclosure in public company filings."[217] The purpose of that initiative is to develop "a more comprehensive framework that produces consistent, comparable, and reliable climate-related disclosures."[218] Such information would be useful to investors who increasingly consider "climate-related issues when making their investment decisions."[219]

On March 15, 2021, Acting Chair Lee requested public input concerning climate change disclosure rules.[220] Specifically, the SEC requested guidance as to whether it would be helpful to mandate disclosure of each corporation's efforts "to evaluate or project climate scenarios, and what information from or about such internal evaluations should be disclosed to investors to inform investment and voting decisions[.]"[221] Professor Jill Fisch observed that mandatory disclosures would serve the useful purpose of creating a compliance obligation.[222] Others expressed concern about whether such revisions would overstep the SEC's role in regulating markets and put the SEC in the middle of fundamental policy disputes concerning the role of the corporation in society.[223]

In response to the SEC's request for public input, Professor Erik Gerding submitted a comment that helpfully addressed objections regarding materiality. Professor Gerding emphasized the financial importance of climate change information for investors: "Investors need high quality disclosure to make comparisons among issuers and investments to understand how this risk—

217. Statement, Allison Herren Lee, Acting Chair, SEC, Statement on the Review of Climate-Related Disclosure (Feb. 24, 2021), https://www.sec.gov/news/public-statement/lee-statement-review-climate-related-disclosure [https://perma.cc/TG69-MJVV].

218. *Id.*

219. *Id.*

220. Statement, Allison Herren Lee, Acting Chair, SEC, Public Input Welcomed on Climate Change Disclosures (Mar. 15, 2021), https://www.sec.gov/news/public-statement/lee-climate-change-disclosures [https://perma.cc/8MKA-JTBB] ("How can the Commission best regulate, monitor, review, and guide climate change disclosures in order to provide more consistent, comparable, and reliable information for investors while also providing greater clarity to registrants as to what is expected of them? Where and how should such disclosures be provided? Should any such disclosures be included in annual reports, other periodic filings, or otherwise be furnished?").

221. *Id.*

222. Letter from Jill E. Fisch, Professor Bus. L., Univ. Pa. L. Sch., to Hon. Gary Gensler, Chair, SEC 1–2 (June 3, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8861700-240098.pdf [https://perma.cc/6U3E-ZRCY] ("Because of the compliance issues associated with securities filings, the Commission's disclosure regime serves an information-forcing role, increasing both the level of information that management provides to the board in connection with required disclosures and the board's attention to those issues.").

223. *See* Amanda M. Rose, *A Response to Calls for SEC-Mandated ESG Disclosure*, 98 WASH. U. L. REV. 1821, 1825 (2021) (discussing the potential problems created by the SEC embracing a breadth of topics in ESG disclosure framework); Letter from Tawny Bridgeford, Deputy Gen. Couns. & Vice President, Regul. Affs., Nat'l Mining Ass'n, to Hon. Gary Gensler, Chair, SEC 7 (June 11, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8911809-244413.pdf [https://perma.cc/C4X3-A77J] (providing National Mining Association's comments to SEC's request for public input).

including the physical risk associated with climate change and the transition risk as the United States and other nations transform their economies to mitigate climate change—would affect their portfolio."[224] Professor Gerding also observed that some investors might seek information regarding risks to specific corporations, while other investors would want to know how a corporation "may be contributing to the climate change that, in turn, poses risks for the economy and individual issuers."[225]

The theory of the common owner bolsters Professor Gerding's argument. Widely diversified holdings made possible by index funds, mutual funds, and exchange traded funds give shareholders exposure to the entire market. Consequently, externalities created by the activities of an individual corporation may, in fact, be internalized by the corporation's investors. For this reason, "institutional investors and asset managers that hold diversified portfolios increasingly recognize the financial benefits of mitigating climate change risk."[226] Because they are exposed to systemic risks, "[u]niversal owners have direct incentives to engage in activism to reduce negative ESG operational, compliance, or other nonfinancial risks of portfolio firms . . . ."[227] In short, to the extent the diversification thesis is accurate, investors will have reason to want each corporation to behave responsibly with respect to climate change; what matters are impacts on the market as a whole.[228] The common owner hypothesis explains shareholder environmental activism without relaxing the assumption that shareholders are focused on maximizing profits.[229]

224. Letter from Erik F. Gerding, Professor of L. & Wolf-Nichol Fellow, Univ. of Colo. Boulder, to Hon. Gary Gensler, Chair, SEC 1 (June 14, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8916927-245052.pdf [https://perma.cc/V9M2-BX3U] (providing Response to Request for Public Input on Climate Change Disclosures). In addition, as Professor Gerding noted, the SEC's disclosure rules have never been strictly limited by materiality. *Id.* at 4 (citing 17 C.F.R. § 229.104 (2020) (Item 104 - Mine Safety Disclosure)).

225. *Id.* at 3. Professor Gerding concluded that both rationales would fall within the SEC's investor-protection mandate. *Id.* ("[D]ifferent investors may have different reasons for wanting climate change disclosures, and this does not lessen the Commission's authority to require these disclosures.").

226. Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 121 COLUM. L. REV. 2563, 2568 (2021); *see also* Madison Condon, *Externalities and the Common Owner*, 95 WASH. L. REV. 1, 4 (2020) (discussing shareholder support for institutional investors that have diversified their portfolios).

227. Harper Ho, *supra* note 23, at 673.

228. *See* JAMES P. HAWLEY & ANDREW T. WILLIAMS, THE RISE OF FIDUCIARY CAPITALISM: HOW INSTITUTIONAL INVESTORS CAN MAKE CORPORATE AMERICA MORE DEMOCRATIC 3–5 (2000) (identifying "universal owners" and their incentives as shareholders).

229. *See* Condon, *supra* note 226, at 12 (contending "that institutional investors are pursuing profit maximizing objectives unrelated to any personal moral agenda, but this profit maximization is directed at the portfolio, rather than firm level. Investors address negative externalities at their source, minimizing harms to their broader portfolio").

4. Environmental Litigation

Another avenue for creating and enforcing corporate compliance obligations is litigation targeting the fiduciary obligations of management.[230] According to one commentator, fossil fuel "corporations have faced a deluge of claims in recent years."[231] Corporations that fail to address climate change may be found liable in court:

> Climate litigation is dynamic and standards of liability are evolving. Where a court might not have intervened five years ago, courts are showing an increasing willingness to rule in favor of outcomes that lead to greater climate action. Whether due to advances in climate science, the growing weight of evidence of the economic and human rights impacts of climate change and the net zero transition, shifting societal norms on the imperative and urgency of climate action, or a combination of these factors—courts are responding. Those seeking to use the courts to accelerate climate action have celebrated a series of landmark judgments in the past 12 months.[232]

The prospects for tort liability in U.S. courts are relatively low at present so long as directors abide by black letter legal and regulatory requirements.[233] However, it is incumbent upon directors as a matter of their fiduciary duties of loyalty and care to study the potential impact of climate change on the corporations they oversee.[234] Also, the science of climate change attribution is improving so that it is becoming increasingly possible to identify causal links between corporate pollution and climate change.[235]

To the extent U.S. corporations do business abroad, the standards applied by courts in other jurisdictions are directly relevant to the risk exposure of U.S. directors.[236]

Climate change presents an existential threat and "[i]t would be remiss, in the face of these facts and these shifting societal norms, to assume that

230. *See* Williams, *supra* note 2, at 1916 (contending "that the private fiduciary duties of directors and officers in American companies can operate to inculcate public social responsibilities into the firm").

231. Benjamin, *supra* note 92, at 316–17 (characterizing cases, collectively, as a "second wave of corporate climate litigation").

232. Cynthia A. Williams & Ellie Mulholland, *What the* Shell *Judgment Means for U.S. Directors*, HARV. L. SCH. F. ON CORP. GOV. (July 22, 2021), https://corpgov.law.harvard.edu/2021/07/22/what-the-shell-judgment-means-for-us-directors [https://perma.cc/93SD-M5X9].

233. *See, e.g.*, Douglas A. Kysar, *What Climate Change Can Do About Tort Law*, 41 ENV'T L. 1, 3–4 (2011) (characterizing climate change as a "paradigmatic anti-tort").

234. Gadinis & Miazad, *supra* note 8, at 1466 ("[D]eveloping . . . a mechanism for early risk discovery and prevention is an imperative for directors and officers, who should find themselves in bad faith if they fail to act.").

235. *See* Benjamin, *supra* note 92, at 325.

236. Williams & Mulholland, *supra* note 232.

courts in the U.S. and across the world will stand down."[237] Tort exposure may be particularly salient for "oil and gas companies, companies in other high-emitting industries, or companies that operate infrastructure or fixed assets highly vulnerable to the effects of climate change in circumstances where there is a high risk of consequent loss and damage."[238] Even if environmental litigants do not prevail in court, they can contribute to the momentum for legal intervention.[239]

5. Shareholder Activists

With very limited exceptions, corporate governance decisions are made by the board of directors or, on a day-to-day basis, by corporate officers.[240] Shareholders do not play a direct decision-making role.[241] In recent years, however, shareholder activists have used the proxy solicitations circulated in advance of annual shareholder meetings to make numerous proposals concerning climate change.[242] Shareholder proposals allow "shareholders to put items on the agenda of the annual meeting."[243] Those proposals "are often used to seek ESG and climate disclosure."[244] For example, "during the 2019 proxy season, more than half of the shareholder proposals brought involved ESG issues, including topics such as disclosing climate change risk and increasing board diversity."[245] Shareholder objectives have "include[ed] disclosure of climate risk, suspension of lobbying efforts to fight carbon regulation, and commitments to clear emissions reduction targets."[246]

These proposals have not been empty gestures. Activists have achieved success, either winning majority shareholder votes or negotiating to withdraw

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237. *Id.*

238. *Id.*; *see also* Benjamin, *supra* note 92, at 325 (stating fossil fuel corporations' "deceptive approach to climate change, combined with their substantial presence in the value chain and high exposure to climate risk, makes them 'prime litigation targets'" (citing Sonja van Renssen, *Courts Take on Climate Change*, 6 NATURE CLIMATE CHANGE 655, 656 (2016))).

239. Benjamin Ewing & Douglas A. Kysar, *Prods and Pleas: Limited Government in an Era of Unlimited Harm*, 121 YALE L.J. 350, 355–56 (2011); Benjamin *supra* note 92, at 318 ("Even if these renewed litigation efforts experience setbacks or are ultimately unsuccessful, corporations are likely to be the subject of increased regulatory and public scrutiny as a result.").

240. *See* ROBERT CHARLES CLARK, CORPORATE LAW 105 (1986) (stating that "directors . . . have the formal legal power to manage the corporation").

241. For this reason, we have classified shareholder activism as an external mechanism for motivating corporations to take on climate mitigation responsibilities.

242. Condon, *supra* note 226, at 4.

243. Cynthia A. Williams & Donna M. Nagy, *ESG and Climate Change Blind Spots: Turning the Corner on SEC Disclosure*, 99 TEX. L. REV. 1453, 1466 (2021).

244. *Id.*

245. Lund & Pollman, *supra* note 226, at 2615; Jennifer Hiller & Shadia Nasralla, *Five Oil Majors Face 2019 Climate Target Pressure by Investors*, REUTERS (Dec. 19, 2018, 5:21 AM), https://www.reuters.com/article/us-chevron-shareholders-resolution/five-oil-majors-face-2019-climate-target-pressure-by-investors-idUSKBN1OI14V [https://perma.cc/8LJV-8KAC].

246. Condon, *supra* note 226, at 4.

proposals in exchange for concessions from the board of directors.[247] For example, "in 2017 and 2018 the world's largest asset managers joined in votes against the advice of the boards of five major energy companies, successfully passing climate resolutions with majority support."[248] The string of recent victories has been made possible by "a fundamental shift . . . amongst global and U.S. institutional investors and asset managers such as BlackRock, Vanguard, State Street, and Goldman Sachs."[249] Institutional shareholders now recognize that climate risks can affect the bottom line.[250]

Among other concessions, corporations have agreed to put climate change experts on corporate boards.[251] ExxonMobil, for example, agreed to put a climate scientist on its board in 2017.[252] By 2020, "17% of all public company boards [included] at least one environmental sustainability expert as a director."[253]

Also, "in response to a shareholder proposal requesting a public report regarding the impact of climate change on the firm, ExxonMobil indicated in December 2017 that it would discuss 'energy demand sensitivities, implications of two degree Celsius scenarios, and positioning for a lower-carbon future' in subsequent disclosures."[254]

Shareholder proposals are not binding, but they matter. Corporations will take pains to avoid negative publicity, which can damage the value of the brand and, in extreme cases, lead to boycotts.[255] Corporations that ignore investor preferences as documented by shareholder proposals may see their stock price drop and their cost of capital go up. Ultimately, shareholders have the power to elect the board, and a board that ignores shareholder proposals may face a proxy battle for control. If this were an easy path, one would expect to see more contested elections, assuming also that climate change proposals can succeed on the merits. In fact, contested elections are rare because a proxy battle for shareholder votes is expensive to wage and incumbent directors

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247. *See* Lund & Pollman, *supra* note 226, at 2577.

248. Condon, *supra* note 226, at 4.

249. Williams & Nagy, *supra* note 243, at 1453.

250. According to Larry Fink, BlackRock's CEO, the perception that climate change matters is producing "a fundamental reshaping of finance." Larry Fink, *A Fundamental Reshaping of Finance*, BLACKROCK (2020), https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter [https://perma.cc/S9WE-3DHP].

251. Gadinis & Miazad, *supra* note 8, at 1422 ("Asset managers like BlackRock and State Street and pension funds like CalPERS are pushing for creating 'climate-competent boards' by recruiting directors with related backgrounds." (footnotes omitted)).

252. *Id.*

253. *Id.*

254. Light, *supra* note 6, at 168. For a list of possible shareholder proposals concerning climate change, see McDonnell et al., *supra* note 75, at 340–41.

255. *See* Kuo & Means, *supra* note 155, at 1309 ("Corporations have no place to hide . . . . In today's 'hyper-politicized' atmosphere, corporations must consider the potential political implications of their economic decisions." (footnote omitted)).

can transmit their message to shareholders at the corporation's expense, giving them a loud megaphone.[256] Also, large institutional investors with the ability to undertake such efforts may lack the incentives or the competence to do so.[257]

Despite these challenges, an insurgent group led by the investment firm Engine No. 1 recently succeeded in replacing two Exxon Mobil directors.[258] Engine No. 1 got its way "based largely on the strength of its argument that failing to plan for the impact of climate change could spell the demise of [the] business."[259] Although insurgent activists have not taken full control of the board, their demonstrated ability to replace incumbent directors sent a powerful message and is likely to spur Exxon's management to give greater weight to climate change considerations.

ExxonMobil's example shows that investors can push corporations to take on greater climate change responsibilities even if they are motivated primarily by financial considerations. To be sure, it is possible that other investors will advocate for corporations to drop climate change goals and focus on increasing short-term profits. That is, "[l]ooking to shareholders as a source of corporate accountability may also be misguided because shareholders are perhaps as much to blame as corporate boards for . . . excessive risk-taking."[260] This concern is enhanced to the extent activist hedge funds seek to compel managers to prioritize investor returns over other objectives.[261] Also, setting aside the possibility that outside shareholders could undercut climate initiatives, it is unclear whether they will know better how to address

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256. *See* BAINBRIDGE, *supra* note 22, at 483 ("A would-be insurgent's obstacles are legion.").

257. *See* Ronald J. Gilson & Jeffrey N. Gordon, *The Agency Costs of Agency Capitalism: Activist Investors and the Revaluation of Governance Rights*, 113 COLUM. L. REV. 863, 868–89 (2013) (critiquing "efforts in jurisdictions as different as the European Union, the United Kingdom, and Israel . . . to harness institutional investors as 'stewards,' that is, as active monitors of long-term company performance"). According to Gilson and Gordon, "intermediary institutional investors [have] little incentive to play this role; as a result, the institutions largely lack the competence to undertake it." *Id.* at 869.

258. Building on that success, the group later placed another preferred candidate on Exxon's board. *See* Jennifer Hiller & Svea Herbst-Bayliss, *Engine No. 1 Extends Gains with a Third Seat on Exxon Board*, REUTERS (Jun. 2, 2021 7:03 PM), https://www.reuters.com/business/energy/engine-no-1-win-third-seat-exxon-board-based-preliminary-results-2021-06-02 [https://perma.cc/8J3N-9H7F].

259. Jessica Camille Aguirre, *The Little Hedge Fund Taking Down Big Oil*, N.Y. TIMES MAG. (Oct. 13, 2021), https://www.nytimes.com/2021/06/23/magazine/exxon-mobil-engine-no-1-board.html [https://perma.cc/3ATW-X7XF]. The core argument was "that, given mounting pressure from society and governments to decarbonize the global economy, it would be strategically smarter for Exxon Mobil to be part of an energy transition, rather than letting itself be outstripped by other companies innovating to meet demand for low-carbon power." *Id.*

260. Harper Ho, *supra* note 23, at 652.

261. *See id.* ("The controversy over shareholder empowerment has deepened with the rise of hedge fund activism, which has sparked debate over whether those most likely to use their power are short-term investors whose strategies will cause firms to take on more risk and jeopardize long-term firm value.").

climate change than management. Thus, appreciation for the role shareholders can play in creating momentum toward climate change mitigation should be tempered by an appreciation that shareholder activism is a double-edged sword.

V. CONCLUSION

Climate change has arrived.[262] Preventing a truly catastrophic rise in global temperature requires transformation of the global economy by the middle of the century.[263] Corporations must commit to doing what is necessary to protect the planet. Vague promises and half-measures are not enough. For this reason, the strictures of a compliance-centered approach to climate change are needed to bolster traditional risk management and ESG. Properly understood, compliance means more than narrow-minded rule following and provides a framework capacious enough to handle the challenges of climate change.

We do not mean to suggest that adopting a compliance-oriented approach to climate change will suffice to align all forms of corporate economic activity with environmental goals. Nor is there a one-size-fits-all answer. However, if corporations commit themselves to tackling the problem of climate change, they have the capacity to lead mitigation and adaptation efforts. Aggregating investments of capital and labor made by individual human beings, corporations can take on projects of immense scale, and their work is not constrained by the infirmity of old age or the inevitability of death.[264] For this reason, early corporations were organized to oversee the construction of cathedrals that their architects knew would take generations to complete.[265] The work of restoring nature's cathedral will also require labor across generations. Those alive today will not see the work completed, but they can ensure that it is well and truly begun.

262. *See* Somini Sengupta, *'No One Is Safe': Extreme Weather Batters the Wealthy World*, N.Y. TIMES (Aug. 13, 2021), https://www.nytimes.com/2021/07/17/climate/heatwave-weather-hot.html [https://perma.cc/GXV4-ZH5Y] ("The extreme weather disasters across Europe and North America have driven home two essential facts of science and history: The world as a whole is neither prepared to slow down climate change, nor live with it.").

263. *See* Brad Plumer & Henry Fountain, *A Hotter Future Is Certain, Climate Panel Warns. But How Hot Is Up to Us*, N.Y. TIMES (Nov. 11, 2021), https://www.nytimes.com/2021/08/09/climate/climate-change-report-ipcc-un.html [https://perma.cc/BH9E-53AG] (reporting that scientists believe "a coordinated effort among countries to stop adding carbon dioxide to the atmosphere by around 2050" would keep global temperatures from rising more than 1.5 degrees Celsius).

264. *See* Andrew A. Schwartz, *The Perpetual Corporation*, 80 GEO. WASH. L. REV. 764, 773 (2012) (identifying corporate permanence as a "defining attribute").

265. For an account of early corporations in the Middle Ages, see JOHN MICKLETHWAIT & ADRIAN WOOLRIDGE, THE COMPANY: A SHORT HISTORY OF A REVOLUTIONARY IDEA 12–14 (2005).