Corporate Climate Governance

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Changing market conditions and investor expectations have revived long-standing debates about corporate purpose and the place of stakeholder concerns in corporate law, inspiring a growing body of scholarship on themes like "new corporate governance" and "stakeholder capitalism." Such proposals have renewed strong criticisms of the impracticability, ineffectiveness, and costs of bringing stakeholder considerations, like climate change, into corporate governance.

These theoretical divides now have immediate real-world implications for the future of corporate governance. Climate risk disclosure mandates have already been widely adopted internationally and in the United States, despite implementation challenges. All of them aim to standardize how information on climate-related financial risk reaches the capital markets, with international standards extending to material sustainability risks as well. Due to their importance to investors, all of them also ask companies to prioritize these stakeholder-linked considerations and to embed them into corporate governance mechanisms in some form. This Article, therefore, argues that these regimes are poised to transform not only corporate reporting practice but corporate governance worldwide as well.

This Article shows how mandatory climate disclosure is already shifting corporate governance norms and standards toward stakeholder integration and considers the implications of this shift for corporate governance doctrine and practice with reference to Delaware law. Even though these mandates do not yet apply nationally in the United States, this analysis is critical given Delaware's influence internationally and the fact that many U.S. companies are already voluntarily following these frameworks or are subject to international standards.

This Article's first contribution is to develop a typology of "thin" and "thick" "corporate climate governance" based on the primary U.S. and international corporate climate reporting standards. Secondly, it identifies how even the "thinner" conceptions of corporate climate governance that have been adopted in the United States challenge the normative underpinnings of fiduciary duties and other corporate governance principles articulated by the Delaware courts. This Article sets the stage for a companion article that responds to the critics of stakeholder governance and that makes the case that corporate climate governance in fact offers a new model of "good" corporate governance.

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INTRODUCTION

Over the past decade, changing market conditions and investor expectations have revived longstanding debates about corporate purpose and the place of stakeholders in corporate law, inspiring a growing body of scholarship on themes like "stakeholder capitalism,"[1] "new corporate governance,"[2] "responsible capitalism,"[3] and "sustainable corporate

1. *See, e.g.*, R. Edward Freeman, Kirsten Martin & Bidhan Parmar, *Stakeholder Capitalism*, 74 J. BUS. ETHICS 303 (2007); John G. Ruggie, Caroline Rees & Rachel Davis, *Making 'Stakeholder Capitalism' Work: Contributions from Business & Human Rights* (Harv. Kennedy Sch. Working Paper, Paper No. 76, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3733228. The Business Roundtable's endorsement of the concept in 2019 spurred its momentum further. *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/SH39-72B4].

2. *See* Oliver Hart & Luigi Zingales, *The New Corporate Governance*, 1 CHI. BUS. L. REV. 195 (2022) (arguing for shareholder welfare maximization over shareholder value maximization).

3. For recent work on this research theme, see *Responsible Capitalism*, EUR. CORP. GOVERNANCE INST., https://www.ecgi.global/projects/responsible-capitalism [https://perma.cc/3QEH-GR94].

governance."[4] Such proposals have renewed strong criticisms of the impracticability, ineffectiveness, and costs of bringing stakeholder considerations like climate change effects and sustainability into corporate governance.[5] These debates have been particularly strident in the United States, which has been the vanguard of shareholder-oriented corporate governance for decades.[6] They are also at the center of deep public controversy and regulatory battles over corporate sustainability and diversity initiatives and the environmental, social, and governance (ESG) investment policies and practices of the largest institutional investors that has now been raging for some time.[7]

These theoretical divides now have immediate real-world implications for the future of corporate governance. In 2023, the European Sustainability Reporting Standards (ESRS) were adopted under the EU's Corporate Sustainability Reporting Directive (CSRD),[8] and

4. *See, e.g.*, Alessio M. Pacces, *Sustainable Corporate Governance: The Role of the Law*, *in* SUSTAINABLE FINANCE IN EUROPE: CORPORATE GOVERNANCE, FINANCIAL STABILITY AND FINANCIAL MARKETS 157 (Danny Busch, Guido Ferrarini & Seraina Grunewald eds., 2d ed. 2024). The European Union launched consultations on "sustainable corporate governance" in 2020 that spurred debate on many of the themes in this Article. Eur. Parl., *Resolution on Sustainable Corporate Governance Resolution*, 2021 O.J. (C 445) 94 (Dec. 17, 2020); *see also infra* note 223 and accompanying text.

5. *See, e.g.*, Lucian A. Bebchuk & Roberto Tallarita, *The Illusory Promise of Stakeholder Governance*, 106 CORNELL L. REV. 91 (2020); Robert T. Miller, *How Would Directors Make Business Decisions Under a Stakeholder Model?*, 77 BUS. LAW. 773 (2022) (arguing the stakeholder model is fundamentally flawed). The rise of stakeholderism has even inspired a defense of shareholder value maximization. STEPHEN M. BAINBRIDGE, THE PROFIT MOTIVE: DEFENDING SHAREHOLDER VALUE MAXIMIZATION (2023) (referring to long-term economic value). *But see* Colin Mayer, *Shareholderism Versus Stakeholderism—A Misconceived Contradiction: A Comment on 'The Illusory Promise of Stakeholder Governance,' by Lucian Bebchuk and Roberto Tallarita*, 106 CORNELL. L. REV. 1859 (2021).

6. On this history and its present-day impact, see generally Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 121 COLUM. L. REV. 2563 (2021).

7. For a survey of these developments in comparative perspective, see generally Virginia Harper Ho, *US ESG Regulation in Transnational Context*, *in* CORPORATE PURPOSE, CSR AND ESG: A TRANS-ATLANTIC PERSPECTIVE 53 (Jens-Hinrich Binder, Klaus J. Hopt & Thilo Kuntz eds., 2024).

8. Directive (EU) 2022/2464, of the European Parliament and of the Council of 14 December 2022 Amending Regulation (EU) No 537/2014, Directive 2004/109/EC, Directive 2006/43/EC and Directive 2013/34/EU, as Regards Corporate Sustainability Reporting, 2022 O.J. (L 322) 15, amended by Directive (EU) 2025/794 of the European Parliament and of the Council of 14 April 2025, 2025 O.J. (L 794) 1 [hereinafter CSRD], amending Council Directive 2014/95, of the European Parliament and of the Council of 22 October 2014 Amending Directive 2013/34/EU as Regards Disclosure of Non-Financial and Diversity Information By Certain Large Undertakings and Groups, 2014 O.J. (L 330). The full suite of ESRS standards includes two general standards and ten ESG topical standards. Commission Delegated Regulation (EU) 2023/2772 of 31 July 2023 Supplementing Directive 2013/34/EU as Regards Sustainability Reporting Standards, 2023 O.J. (L) [hereinafter ESRS]. The European Financial Reporting Advisory Group (EFRAG) amended the ESRS in 2025 as part of its simplification process, reducing required disclosure datapoints by 70%. Eur. Fin. Rep. Advisory Group (EFRAG), "Amended ESRS," (Nov.2025), https://www.efrag.org/en/amended-esrs-0 [https://perma.cc/TWS3-CDKV] [hereinafter ESRS 2025]. The EU's 2024 Corporate Sustainability Due Diligence Directive (CSDDD) introduces related corporate governance mechanisms in the form of due diligence obligations to prevent risk-shifting of corporate externalities, but a full analysis of the CSDDD is beyond the scope of this Article. Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859, O.J. (L) [hereinafter CSDDD]. The CSRD, the CSDDD, and the related European "taxonomy" directives were substantially amended by the Omnibus I Package in 2025, which was approved by the Council of the European Union in 2026. *See generally* Council of the EU, Council Signs Off Simplifcation of Sustainability Reporting and Due Diligence Requirements to Boost EU Competitiveness, Press Release (Feb. 24, 2026) [hereinafter *Omnibus*]. These changes have been reflected in this Article.

the International Sustainability Standards Board (ISSB) of the IFRS Foundation adopted mandatory corporate climate and sustainability disclosure rules[9] that are already in effect for most of the largest companies worldwide and cover companies representing over half of global greenhouse gas (GHG) emissions. [10] In 2024, the United States Securities and Exchange Commission (SEC)[11] and the State of California both introduced mandatory climate disclosure rules with compliance slated to begin in 2026 for 2025 data under the state rules.[12] New York and other states have proposed legislation that would follow suit.[13]

At first blush, these climate reporting mandates may not appear to alter corporate governance at all. In 2024, the SEC quickly stayed the U.S. federal rules pending resolution of the legal challenge that was brought almost immediately in the federal courts.[14] The Trump administration then refused to defend the rules, and SEC Chair Atkins proposed reforms to review and potentially pare back existing corporate disclosure requirements.[15] California's

9. Int'l Sustainability Standards Bd. (ISSB), *IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information* (June 2023), https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards-issb/english/2023/issued/part-a/issb-2023-a-ifrs-s1-general-requirements-for-disclosure-of-sustainability-related-financial-information.pdf?bypass=on [https://perma.cc/2BMQ-6AV7] [hereinafter *IFRS S1*]; ISSB, *IFRS S2 Climate-Related Disclosures* (June 2023), https://www.ifrs.org/content/dam/ifrs/publications/pdf-standards-issb/english/2023/issued/part-a/issb-2023-a-ifrs-s2-climate-related-disclosures.pdf?bypass=on [https://perma.cc/X9NY-8KXC] [hereinafter *IFRS S2*].

10. IFRS Foundation, *Progress on Corporate Climate-related Disclosures—2024 Report* 1, 4 (Nov. 2024), https://www.ifrs.org/content/dam/ifrs/supporting-implementation/issb-standards/progress-climate-related-disclosures-2024.pdf [https://perma.cc/Q4UM-SWZB] [hereinafter *Progress*] (reporting that the ISSB standards already apply to companies representing 40 percent of global market capitalization).

11. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

12. The Climate Corporate Data Accountability Act 2023, Cal. S.B. 253, ch. 382 (Oct. 7, 2023) *amended by* Cal. S.B. 219 (Sept. 27, 2024) requires Scopes 1, 2, and 3 greenhouse gas (GHG) emissions reporting from covered companies. Greenhouse Gases: Climate-Related Financial Risk (S.B. 261), will require biennial corporate climate risk reporting in accordance with international standards as of 2026. Greenhouse Gases: Climate-related Financial Risk 2023, Cal. S.B. 261, ch. 383 (Oct. 7, 2023), *amended by* Cal. S.B. 219 (Sept. 27, 2024). Both apply to public and private companies doing business in the state that exceed specified annual revenue thresholds.

13. State climate disclosure legislation based on the California model has been introduced in both New York and Colorado but has not yet passed. Jon McGowan, *New York Fails to Adopt Climate Reporting Requirement in 2025 Session*, FORBES (June 12, 2025), https://www.forbes.com/sites/jonmcgowan/2025/06/12/new-york-fails-to-adopt-climate-reporting-requirement-in-2025-session/ (on file with the *Journal of Corporation Law*) (discussing Senate Bills 3456 and 3697); Directive (EU) 2026/470 of the European Parliament and of the Council of 24 February 2026 amending Directives 2006/43/EC, 2013/34/EU, (EU) 2022/2464 and (EU) 2024/1760 as regards certain corporate sustainability reporting requirements and certain corporate sustainability due diligence requirements, O.J. (L), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L_202600470 [https://perma.cc/YPS2-KRCF].

14. Isla Binnie, *US SEC Stays Climate Disclosure Rule Amid Legal Challenges*, REUTERS (Apr. 4, 2024), https://www.reuters.com/legal/us-sec-stays-climate-disclosure-rule-amid-legal-challenges-2024-04-04/ (on file with the *Journal of Corporation Law*).

15. Press Release, SEC, SEC Votes to End Defense of Climate Disclosure Rules (Mar. 27, 2025), https://www.sec.gov/newsroom/press-releases/2025-58 [https://perma.cc/KQV4-955X]; Paul S. Atkins, Chairman, SEC, Statement on Reforming Regulation S-K (Jan. 13, 2026), https://www.sec.gov/newsroom/speeches-statements/atkins-statement-reforming-regulation-s-k-011326 [https://perma.cc/85A2-VQJT]. The litigation is pending in *Nat'l Legal & Pol'y Ctr. v. SEC*, No. 24-1685, (8th Cir. Apr. 1, 2024) and the SEC has elected not to formally withdraw the rules through administrative process but has left their defense to intervening states' attorneys general. Caroline A. Crenshaw, Comm'r, SEC, Statement on the Commission's Status Report in the Climate-

state-level rules are also embroiled in litigation.[16] European leaders, for their part, are working to simplify their climate disclosure rules and related sustainability regulations, and to narrow their reach, in order to address compliance costs and competitiveness concerns.[17] As to substance, "corporate climate governance" is not defined at all in most of these frameworks and none purport to change the corporate governance rules that currently apply to covered companies.[18] Instead, they all aim to harness corporate governance mechanisms to improve investors' access to climate risk and related information on corporate governance that is financially material to investors.[19]

Nonetheless, "corporate climate governance," a concept this Article develops in Part I below, is at the core of all these established climate disclosure frameworks, despite key differences in their scope and ambition. Indeed, a fundamental and novel feature shared by all—even the narrowest—is that they ask companies to integrate climate risk factors historically considered stakeholder concerns—into corporate governance in some form. The EU and international standards reach climate opportunities and certain other environmental and societal risks and impacts as well. While the core justification for reporting these risks is their financial effect on companies and their importance to investors, all of them also require covered companies to monitor GHG emissions and other sources of climate risk, to assess the financial impacts of climate risk on the company's strategy and operations, and to bring material climate risks into corporate risk oversight and management functions and processes.[20] While scholars have previously considered the implications of these rules for corporate fiduciary duties in different jurisdictions,[21] the broader corporate governance implications of these mandatory climate disclosure regimes will vary across jurisdictions and have been largely unexamined in the U.S. context.[22] These effects are also likely to be particularly pronounced for companies in the United States, the United Kingdom and other jurisdictions whose corporate governance rules adhere more strongly to shareholder primacy.

This Article argues that domestic and international mandatory climate disclosure regimes are already shifting corporate governance norms and standards further toward stakeholder integration in some form. This shift is already affecting many of the largest U.S. companies that must report against standards imposed by state law in California or in other jurisdictions, even though climate disclosure mandates have been abandoned at the federal

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Related Disclosure Rules Litigation (July 23, 2025), https://www.sec.gov/newsroom/speeches-statements/crenshaw-statement-climate-related-disclosure-rules-litigation-072325 [https://perma.cc/2AB2-JW55].

16. Chamber of Com. of the United States v. Cal. Air Res. Bd., 763 F. Supp. 3d 1005 (C.D. Cal. 2025) (challenging the California rules); Exxon Mobil Corp. v. Sanchez, 2:25-cv-03104 (E.D. Cal. 2025) (same).

17. For the amendments under the EU Omnibus reforms, see *supra* note 8 and accompanying text; *see also A Competitiveness Compass for the EU*, COM (2025) 30 final (Jan. 29, 2025) (presenting Europe's broader strategic plan).

18. *See infra* Part I (introducing these frameworks).

19. *See e.g.*, The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249); *see also IFRS S1*, *supra* note 9, at para. 1. *Cf.* CSRD, *supra* note 8, at preamble, 16–18, para. 2, 6 & 9 (identifying both sustainable development and informational goals).

20. *See infra* Part II.B (summarizing these common elements).

21. *See infra* Part II.C–E (discussing this literature).

22. Some scholars have examined the corporate governance effects of the EU's 2014 reporting reforms with reference to Delaware law. *See, e.g.*, Sabrina Bruno, *Climate Corporate Governance: Europe vs. USA?*, 16 EUR. CORP. FIN. L. REV. 687 (2019).

level.[23] Indeed, by some estimates, half of the U.S. firms that would have come under the stalled SEC rules will still be subject to similar or more rigorous reporting under these other regimes.[24] Many U.S. companies already voluntarily adopt some form of corporate climate governance based on the same framework that undergirds all climate reporting mandates at present, and 80% already use this same standard to provide climate-related risk disclosure in part or in full.[25] Since the rules extend to certain affiliates and business partners, firms that are not directly within the scope of these regimes will also need to adapt as their core business partners and investors begin to comply and as parallel rules are adopted by more regulators worldwide.[26] The corporate governance effects of emerging mandatory climate risk reporting, therefore, matter to many U.S. firms as a result of the "Brussels effect" of the EU rules or the "California effect" of the state-level rules.[27]

Given this context, the Article makes two key contributions. The first is to develop a typology of "thin" and "thick" "corporate climate governance" based on the primary U.S. and international corporate climate reporting standards. Even though they may not be implemented in the near term, the U.S. federal rules remain useful analytically here since they are the only climate reporting standards to date that have been crafted to avoid any direct corporate governance effects on covered firms. The narrow approach taken by the SEC rules, therefore, offers an important baseline for our analysis of the leading climate disclosure frameworks. This effort identifies key differences in the governance dimensions of these frameworks and the degree to which they require corporate boards and management to integrate climate risk considerations into decision-making.

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23. Moriah Costa, *Half of US Firms Under SEC Climate Scope May Still Need to Disclose*, GREEN CENT. BANKING (Mar. 28, 2025), https://greencentralbanking.com/2025/03/28/half-of-us-firms-under-sec-climate-disclosure/ [https://perma.cc/M4Z4-2HZ3] (citing CERES, COMPANIES COVERED BY CLIMATE DISCLOSURE LAWS: AN UPDATED ESTIMATE) (2025)). Approximately 3,000 U.S. companies were expected to be within the scope of the European rules as initially adopted. Dieter Holger, *At Least 10,000 Foreign Companies to Be Hit by European Rules*, WALL ST. J. (Apr. 5, 2023), https://www.wsj.com/articles/at-least-10-000-foreign-companies-to-be-hit-by-eu-sustainability-rules-307a1406 (on file with the *Journal of Corporation Law*) (reporting that one-third are U.S. firms). However, this number is much reduced under the Omnibus I reforms. Lamar Johnson, *EU Legislators Reach Agreement to Simplify Sustainability Reporting*, ESG DIVE (Dec. 9, 2025), https://www.esgdive.com/news/european-parliament-council-reach-agreement-simplify-scope-csrd-csddd-omnibus-eu/807430/ [https://perma.cc/8CSQ-9RR2] (reporting that the reforms have removed 90% of companies from the scope of the CSRD and 70% of those originally with the CSDDD's scope).

24. Costa, *supra* note 23 (citing CERES, *supra* note 23).

25. In a 2024 sample of over 1,000 North American firms, including over 940 with U.S. headquarters, approximately 60% reported on board oversight of climate risk based on the climate reporting framework developed by the Financial Stability Board's Task Force on Climate-Related Financial Disclosure (TCFD). FINANCIAL STABILITY BOARD, ACHIEVING CONSISTENT AND COMPARABLE CLIMATE-RELATED DISCLOSURES 2024 PROGRESS REPORT (2024), https://www.fsb.org/uploads/P121124.pdf [https://perma.cc/24EN-E8GJ]. According to the OECD, over 80% of U.S. companies by market capitalization disclose Scopes 1 and 2 GHG emissions, and over 60% of U.S. companies disclose Scope 3 emissions. OECD, GLOBAL CORPORATE SUSTAINABILITY REPORT 14–15, figs. 2.3 & 2.5 (2024), https://www.oecd.org/en/publications/global-corporate-sustainability-report-2024_8416b635-en.html (on file with the *Journal of Corporation Law*). Over 60% of U.S. companies had board-level oversight of climate issues as of 2022. *Id.* at 31 fig.2.28.

26. Governance and climate monitoring practices of corporate shareholders and other investors are also expected to shift in response to these rules. *See infra* Part I.C.

27. On the "Brussels effect," see generally ANU BRADFORD, THE BRUSSELS EFFECT: HOW THE EUROPEAN UNION RULES THE WORLD (2020).

Second, at a doctrinal level, this Article considers the implications of corporate climate governance for corporate governance doctrine and practice as a matter of Delaware law. There are good reasons to do so. At the outset, corporate governance theory and practice globally have been heavily influenced by developments in Delaware corporate law, as well as by U.S. federal corporate governance reforms and academic discourse. It is therefore important to identify the extent to which Delaware law is in tension with or aligns with corporate climate governance in its various forms. This analysis also offers guidance for Delaware companies subject to state or foreign mandates, including many U.S. listed companies. Moreover, it is likely that the SEC's final rules will be the template for any future climate disclosure mandate the SEC might reinstate in the future. Considering how the now-dormant SEC rules fit with Delaware state corporate law, therefore, offers an important point of reference.

Specifically, this analysis considers the direct implications of corporate climate governance for corporate purpose, managerial incentives, and board function for U.S. firms covered by these mandates, and their indirect force for others.[28] Here the Article argues that even the "thinnest" versions of corporate climate governance, represented by the Biden-era SEC climate disclosure rules, introduce new governance mechanisms and require climate-conscious decision-making. They therefore challenge some of the normative underpinnings of fiduciary duties as articulated by the Delaware courts.[29] The corporate governance effects of the state-level rules in California and the international standards adopted by the ISSB and EU will be even stronger.

Because the question deserves deeper inquiry, this Article does not take a position on whether corporate climate governance standards should be adopted as a matter of state corporate law but takes as its more modest goal the task of outlining where corporate climate governance aligns with and where it challenges current law or norms of state corporate law in Delaware. This Article also does not directly engage debates over whether the SEC has the authority to adopt climate or other ESG reporting mandates, although I and others have argued elsewhere that it does.[30] In addition, sustainability reporting standards encompass a broader range of stakeholder-related factors and are not a focus of the U.S. federal or state rules, while climate risk is the common core of all of the disclosure mandates surveyed here. Therefore, the arguments advanced here are limited to corporate climate governance, and broader sustainability governance concepts are beyond its scope. Readers are, however, encouraged to consider whether some of the arguments advanced here should apply equally to sustainability disclosure and governance, which are part of the ISSB and European standards.[31] And finally, this Article leaves to separate work the

28. *See infra* Part II.

29. *See infra* Part II.

30. Virginia Harper Ho, *Modernizing ESG Disclosure*, 2022 ILL. L. REV. 277, 303; Letter from Jill E. Fisch, Professor, Univ. Penn. Carey L. Sch. & George S. Georgiev, Assoc. Professor, Emory Univ. Sch. of L., to Vanessa A. Countryman, Sec'y., SEC, on Proposed Rule for the Enhancement and Standardization of Climate-Related Disclosures for Investors (June 6, 2022), www.sec.gov/comments/s7-10-22/s71022-20130354-297375.pdf [https://perma.cc/MV86-MT76].

31. These questions are taken up further in separate work. Virginia E. Harper Ho, Stakeholders & the Dawn of Corporate Climate Governance 1 (Jan. 31, 2025) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5124607; *see also* Jeffrey N. Gordon, *Unbundling Climate Change Risk from ESG* 1, (Columbia L. Econ. Working Paper No. 667, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4547679.

normative case for the proposition that corporate climate governance is indeed "good" corporate governance.[32]

This Article proceeds as follows. Part I introduces concepts of "thin" and "thick" corporate climate governance along a spectrum that is based on the primary international corporate climate reporting standards. Part II then considers the corporate governance implications of both thin and thick approaches. Given the historical influence of Delaware corporate law on corporate governance in the United States and abroad and its influence on corporate governance scholarship internationally, Part II takes Delaware corporate law as its point of reference; while identifying where corporate climate governance may align differently in other jurisdictions and under "thicker" corporate climate governance variants.

I. CORPORATE CLIMATE GOVERNANCE: CONCEPTS & IMPLICATIONS

In 2023, the OECD's Principles of Corporate Governance were revised to define corporate governance in terms of the relationships among a company's board of directors, its management, and its shareholders and stakeholders.[33] The Principles' emphasis on stakeholders is noteworthy, since stakeholders do not generally enjoy corporate governance rights under the corporate or company law of most jurisdictions. Moreover, beyond companies' obligations to comply with applicable law, whether corporate boards and management exercise oversight of the business or legal risks to the company that may arise from relationships with their stakeholders, their dependence on natural resources, and whether companies take steps to reduce or remedy environmental externalities been largely a matter of managerial discretion, business ethics, and firm-specific strategies.[34] Corporate climate governance is changing this landscape.

The origins of corporate climate governance may be found in the voluntary framework for reporting climate-related financial risk that was developed by the Task Force on Climate-related Financial Disclosure (TCFD) of the G20's Financial Stability Board (FSB) with reference to earlier voluntary sustainability reporting standards, including the corporate Greenhouse Gas (GHG) Protocol.[35] Since its release in 2017, the TCFD framework has become the shared foundation of mandatory climate disclosure regulations internationally, including California's mandatory climate disclosure legislation, the embattled U.S. federal climate disclosure rules, and the climate and sustainability disclosure standards developed by the ISSB and the European Union. The TCFD also influenced the 2023 revision of the OECD Corporate Governance Principles and international green finance standards.[36]

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32. Harper Ho, *supra* note 31.

33. OECD, G20/OECD PRINCIPLES OF CORPORATE GOVERNANCE 2023 6 (2023) (observing that corporate governance encompasses the "structure and systems through which the company is directed and its objectives are set, and [through which] the means of attaining those objectives and monitoring performance are determined").

34. *See infra* Part II (discussing these foundational principles under Delaware corporate law).

35. TCFD, FINAL REPORT: RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (2017) [hereinafter TCFD]; WORLD BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT & WORLD RESOURCES INSTITUTE, THE GREENHOUSE GAS PROTOCOL A CORPORATE ACCOUNTING AND REPORTING STANDARD (revised ed. 2015).

36. The OECD's white paper on climate change and corporate governance identifies some of the key issues across OECD jurisdictions and discusses the TCFD's influence. *See generally* OECD, CLIMATE CHANGE AND CORPORATE GOVERNANCE 7, 14–19 (2022).

In 2023, the role of the Task Force in advancing climate-related disclosures concluded and it was transitioned to the IFRS Foundation as part of its role in developing and supporting implementation of the ISSB standards as an international baseline.[37]

All of these reporting frameworks—even the most expansive—are grounded on investor-oriented economic rationales, reflecting international consensus that climate risk can have financially material effects on firms and their investors.[38] All of them include various implementation reliefs, such as phase-ins, scaling for smaller firms, and various exemptions, but these are not of direct relevance to our discussion here. Whether these standards apply only to listed firms, to certain other large firms, or more broadly is determined by each adopting jurisdiction.

"Corporate climate governance" is not a developed concept under any of these climate disclosure standards. The TCFD defines it simply as "[t]he organization's governance around climate-related risks and opportunities."[39] The discussion that follows therefore begins by distilling the core elements of corporate climate governance from the standards themselves. As explained below, the corporate governance elements of these standards, when taken as a whole, create a spectrum of "thin" to "thick" corporate climate governance regimes.

A. Sources of Corporate Climate Governance

The corporate or company laws of various jurisdictions have not been the primary source of corporate climate governance, even though the United Kingdom and many countries in Europe and Asia have already incorporated elements of what is described here as corporate climate governance into their domestic company law or into corporate governance codes.[40] This is not surprising, since corporate governance principles and standards have historically been introduced and enforced through the rules and guidelines adopted by stock exchanges and capital market regulators, and have been heavily influenced by transnational soft law sources, such as the OECD Principles of Corporate Governance.[41] The latter have proven to be extremely influential in the development of domestic corporate

37. TCFD, *About*, https://www.fsb-tcfd.org/ [https://perma.cc/QZ9J-9BZD].

38. The economic and public policy rationales for these reforms have been laid out in numerous sources elsewhere. *See, e.g.*, INT'L ORG. SEC. COMM'N. (IOSCO), STATEMENT ON DISCLOSURE OF ESG MATTERS BY ISSUERS 1, 2 (2019), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD619.pdf [https://perma.cc/7A77-V8CU] (discussing the economic rationales for ESG integration in investment). *See also* TCFD, *supra* note 35, at 1–3; Harper Ho, *supra* note 30, 286–303 (discussing the economic rationales).

39. TCFD, *supra* note 35, at 14. The ISSB and ESRS also include certain disclosures of climate and sustainability-related opportunities, subject to exclusions for commercially sensitive information, but as our focus is on risk and externalities, these are beyond the scope of this Article.

40. The 2013 amendments to the U.K. Companies Act 2006, for example, introduced mandatory GHG emissions disclosures as part of the directors' report for certain listed companies. Companies Act 2006 (U.K.), as amended 2013 No. 1970, at Part 7. Details on the regulatory developments in common law jurisdictions can be found at Commonwealth Climate and Law Initiative, *Directors' duties navigator: Climate risk and sustainability disclosures*, https://commonwealthclimatelaw.org/global-navigator/ [https://perma.cc/A955-WBZR].

41. OECD, *supra* note 33. On the influence of the TCFD and other forms of "international" or "transnational" corporate law, see Mariana Pargendler, *The Rise of International Corporate Law*, 98 WASH. U. L. REV. 1765, 1772 (2021) (coining the phrase); *see also* Dionysia Katelouzou & Peer Zumbansen, *The Transnationalization of Corporate Governance: Law, Institutional Arrangements, & Corporate Power*, 38 ARIZ. J. INT'L & COMP. L. 1, 47–54 (2021).

governance law and practice and are likely to continue to encourage the further development of corporate climate governance in the United States even in the absence of climate legislation and related corporate governance reforms at the state or federal levels. The TCFD itself is a prime example of transnational or "international" corporate "soft law."[42]

As the discussion below explains, corporate governance is foundational to the TCFD, and therefore to all the mandatory climate disclosure standards based on it. As a result, corporate climate disclosure is already redefining corporate governance in fundamental ways. To ground Part II's analysis of these important changes, I first introduce here the leading climate disclosure frameworks, beginning with the TCFD itself, which is also the primary reporting standard under the California climate disclosure rules and similar proposals in other states.

1. The TCFD Framework & California Climate Disclosure Regulation.

In 2023, the state of California moved ahead of the SEC to require all companies nationally and internationally of a certain size doing business in the state to provide biennial climate risk disclosures beginning in 2026 on a comply-or-explain basis in accordance with either the TCFD or an international equivalent, including the ISSB standards, discussed below.[43] As explained below, the corporate governance effects of compliance with the TCFD and the ISSB standards are similar, but the option to follow the more prescriptive ISSB standards may reduce reporting costs for firms under the California rules that are already subject to the ISSB. Scopes 1 and 2 GHG reporting in accordance with the GHG Protocol is required as of 2026, with Scope 3 reporting to follow, for the largest companies doing business in the state under California's separate GHG reporting rules.[44] At the time of this writing, all of these state rules are being litigated in federal court.[45] Of note, the California rules apply not only to listed firms but also to large private firms (including foreign firms) doing business in the state.[46] Many foreign jurisdictions, including the United Kingdom, similarly mandated TCFD-based climate disclosure for the largest firms as a first step before the release of the ISSB standards in 2023.[47]

As Table 1 indicates, the TCFD framework includes eleven disclosure recommendations under four "pillars," all of which relate directly or indirectly to the first pillar—corporate governance. Under this "governance" pillar, companies should describe how the corporation's board and management identify, manage, and in the case of the board, oversee, climate-related risks and opportunities.[48] Companies should also report on whether the board and its committees are informed about climate-related issues and the extent to which the board considers climate risk with respect to the company's major transactions and

42. Pargendler, *supra* note 41, at 1811.

43. *See supra* note 12 and sources cited therein.

44. Cal. SB 253, ch. 382 (Oct. 7, 2023), *amended by* Cal. SB 219 (Sept. 27, 2024) (codified as CAL. HEALTH & SAFETY CODE § 38532(2)(A)(ii) (2025)).

45. *See supra* note 16 and sources cited therein.

46. *See supra* note 12 and sources cited therein (regarding the eligibility thresholds). The state climate disclosure mandates proposed in New York and other states have mirrored the California rules, but since these have not yet been adopted at the time of this writing, this discussion will refer to the state model as the "California" rules. *Id.*

47. On TCFD adoption, see IFRS Foundation, *supra* note 10.

48. TCFD, *supra* note 35, at 14.

investments, strategy, planning, and risk management, as well as its goals and targets for addressing climate-related risks.[49] The next two pillars—corporate strategy[50] and climate risk management[51]—also relate to corporate governance and ask companies to describe how they assess climate risk materiality and their processes for managing and responding to it. The fourth pillar is reporting on the use of "metrics and targets" to assess and manage climate-related risks, including those related to energy, water, and land use, and waste management.[52] The TCFD also encourages companies to disclose performance indicators used to assess progress against any targets that have been set and to link executive compensation to remuneration.[53] Companies reporting against the TCFD under the California legislation should describe in narrative form their climate risks and their climate risk oversight and risk management practices, as well as their climate strategy, transition plan, and resilience over the short- to long-term with reference to the Paris targets.[54]

Most critical to the TCFD drafters was the need to identify the *financial* effects of climate risk and the impact of climate risk on the company's business, strategy, and financial performance.[55] Accordingly, corporate climate externalities and other stakeholder impacts are not included in the recommended disclosures, and materiality is determined based on the definition that applies to financial reporting in the adopting jurisdiction.[56] At the same time, certain stakeholder considerations are integral to TCFD-based reporting, since companies should assess financial impacts and business resilience across their "upstream" and "downstream" value chains.[57]

In addition, the TCFD recommends disclosure of direct (Scope 1) and indirect (Scopes 2 and 3) GHG emissions. GHG emissions are one of the most basic and widely used indicators of companies' own impacts on climate change, but they are also a measure of

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49. *Id.* at 19.

50. Under the "strategy" pillar, companies should disclose the actual and potential financial impacts of climate risks and opportunities on the company and its strategy over the "short, medium, and long term," as defined by the company, as well as the company's strategy for climate resilience under a two degree or lower climate warming scenario, how the company prioritizes climate risks and incorporates them into corporate strategy, and how strategic changes may be made to address potential climate risks and opportunities. *Id.* at 20–21.

51. Under the "risk management" pillar, companies should describe their processes for identifying, assessing, and managing climate risk, including how such processes fit into the company's overall risk management systems, how they determine the priority of climate risk, how management is informed of such risks, and whether they report to the board or a board committee on such risks. *Id.* at 21.

52. Under the "metrics and targets" pillar, companies should indicate any measures they use in climate risk management, any targets they set for climate risk management and related corporate performance, the use of internal carbon pricing, and GHG emissions. *Id.* at 22–23. The TCFD encourages the use of standardized, quantitative, science-based measures for reporting climate-related financial risks wherever possible and has developed extensive sector-specific standardized measures and guidance for the financial sector and for other climate-sensitive sectors. *See generally* TCFD, GUIDANCE ON METRICS, TARGETS, AND TRANSITION PLANS 1, 19–20 (2021), https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf [https://perma.cc/U9SP-8C9H] [hereinafter TCFD METRICS & TARGETS].

53. *See generally* TCFD METRICS & TARGETS, *supra* note 52.

54. TCFD, *supra* note 35, at 20–21.

55. *Id.* at 1–3, 8–9.

56. *Id.* at 17. Transition risks, however, may include reputational risks to the firm from changing stakeholder expectations. TCFD, *supra* note 35, at 10 tbl.1.

57. "Value chain" is defined in the TCFD to include its "upstream" supply chain, as well as "downstream" operations relating to final production, delivery, and use by consumers and other end users across the product life cycle. TCFD, *supra* note 35, at 20, 64.

financial risk to reporting companies. This is because companies with higher GHG emissions may be more exposed to transition risks when climate regulation is introduced or when market changes make high-emitting operations more costly.[58]

Table 1 TCFD Recommendations.[59]

Governance	*Strategy*	*Risk Management*	*Metrics and Targets*
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

As a voluntary framework, the TCFD was designed to be compatible with different legal systems and therefore operates with reference to each jurisdiction's definition of materiality for financial reporting purposes.[60] For U.S. companies reporting under a state mandate, the materiality standard that applies under the federal securities laws would therefore apply.[61] The TCFD also requires no changes to state corporate law, nor does it constrain any negotiated provisions that may be found in a company's governing documents. Furthermore, because the TCFD provides only recommendations, companies applying the TCFD, such as those subject to the California regulations, are free to implement the TCFD recommendations as they wish, with the exception of GHG reporting that is separately mandated. More specifically, the TCFD does not alter the balance of power between shareholders, management, and other constituencies, protections for minority shareholders, or the rules governing takeovers and other fundamental changes that prevail in California or in other jurisdictions that have adopted TCFD-based reporting. The TCFD framework has therefore been readily adopted by both shareholder- and stakeholder-oriented jurisdictions.[62] Nonetheless, as discussed below, full compliance with the TCFD's recommended disclosures would have broader corporate governance effects than would obtain under the federal climate disclosure rules.

58. For this reason, the TCFD recommends reporting Scopes 1 and 2 emissions independent of materiality and Scope 3 emissions where they are a significant emissions source (i.e., above 40%). *Id.* at 19–20; *see also id.* at 5, 10 (identifying associated transition-related financial risks).

59. *Id.* at 14.

60. *Id.* at 8–11, 33–34 (regarding financial materiality).

61. Under the Supreme Court's standard of materiality, as established in *TSC Indus. Inc. v. Northway, Inc.*, information is "material if there is a substantial likelihood that a *reasonable shareholder* would consider it important in deciding how to vote" or "that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information" available to the investor in reaching a voting or investment decision." TSC Indus. Inc. v. Northway, Inc., 426 U.S. 438, 448–49 (1976) (emphasis added). *See also* Basic, Inc. v. Levinson, 485 U.S. 224, 231 (1988) (extending the *TSC Industries* standard to Section 10(b) and Rule 10b-5 of the Securities Exchange Act of 1934).

62. *See generally Progress*, *supra* note 10.

2. The SEC's 2024 Climate Disclosure Rules

Nearly 15 years after the SEC's first guidance about the materiality of climate risk to companies and their investors,[63] the SEC introduced climate disclosure rules in 2024 based on the TCFD and the GHG Protocol.[64] Although the federal rules are effectively defunct under the Trump administration,[65] they again offer an important point of reference, given their contrast to the more robust international TCFD-based frameworks.[66]

Despite their common origins in the TCFD framework, the SEC's climate disclosure rules are far more flexible and narrower than the other international climate disclosure mandates. To begin, the SEC's rules are grounded on the long-standing materiality standard that applies under the federal securities laws.[67] This standard largely aligns with the ISSB's financial materiality approach but is more limited than the double materiality standard adopted by the European Union. In contrast to both the ISSB standards and the ESRS, the SEC rules are limited to climate risk disclosure. Specifically, the rules require companies to assess the materiality of actual and potential climate-related financial risks *to the company itself* and to disclose those that have had or are reasonably likely to have a material impact on the registrant's "business, results of operations, or financial condition," if any.[68] In contrast to the SEC's initial draft, climate risk assessment under the final rules does not extend to the company's "value chain," which the other international standards, following the TCFD, define to include direct and indirect business partners and consumers.[69]

The final SEC rules, like the TCFD, require a description of the board's oversight of climate risks and management's role in assessing and managing material climate risks,[70] but if no material risks are identified, companies would simply disclose that the board of directors and management have no role in overseeing or managing such risks and no further disclosures of the financial effect of such risks would then need to be made.[71]

If, on the other hand, a covered company identified any material climate risks, the company would then have to explain the nature of those risks.[72] It would also then be required to assess and report "the actual and potential material impacts of any identified

63. Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 6290 (Feb. 8, 2010).

64. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,673–74 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

65. *See supra* note 15 and accompanying text.

66. *See infra* Part I.B (placing the federal rules as one pole of the corporate climate governance spectrum).

67. *See supra* notes 60–62 and accompanying text.

68. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,674, 21,914, Item 1500 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249) (defining "climate-related risks").

69. *Id.* at 21,687, 21,692 (discussing the exclusion of the "value chain" from its definition of "climate-related risks"). *See, e.g.*, ESRS 2025, *supra* note 8, at Annex II (defining "value chain" as the "full range of activities, resources and relationships related to [a reporting entity's] business model and the external environment in which it operates. [Encompassing those] the undertaking uses and depends on to create its products or services from conception to delivery, consumption and end-of-life.").

70. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,710–13 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

71. *Id.* at 21,713.

72. This assessment is to be based on the same standard that applies for risk assessment under Management's Discussion and Analysis (MD&A). *Id.* at 21,696 & n.383.

climate-related risks on [its] strategy, business model, and outlook," including any climate adaptation or mitigation activities, and whether those impacts were considered in financial planning, capital allocation, or transition planning.[73] Companies that identify material climate risks would also have to decide whether to "mitigate, accept, or adapt" to the risk, whether to prioritize such risks, and whether to adjust the company's strategic direction or allocate capital in response, though the rules would not dictate the outcome of any of these decisions.[74] The largest reporting companies would also have to disclose Scopes 1 and 2 GHG emissions if material, eventually with third-party assurance.[75] In order to make these disclosures, the company's board of directors and senior management would therefore at a minimum be required to *consider* climate risk factors and assess their probability, expected magnitude, and financial impacts. That is, they would be required, as a matter of disclosure compliance, and as a matter of strategy to determine whether or not to respond to any identified material risks and financial impacts.

Again, the SEC rules would not, however, require companies to adopt particular policies or actions to respond to material climate risks, nor would they require companies to consider climate risk in connection with *all* decisions of the board or senior management. Therefore, the rules would allow companies to elect *not* to adapt to, manage, or mitigate any material climate risk, and to decide not to adopt any transition plan or resilience strategy at all.[76] However, each of those decisions must be affirmatively made and disclosed to investors, and the SEC emphasized in its adopting release that the purpose of these rules was to ensure that investors were informed about whether and how covered companies are managing or responding to material climate risks.[77] Companies that have set specific climate mitigation targets (such as a "net zero" target), adopted a climate transition plan, or conducted a climate resilience analysis would then be required to make further specified disclosures about the parameters and implementation of these plans and targets, including any related material expenditures.[78] Notably, the SEC's rules would go beyond the ISSB or ESRS standards in one key aspect, since they would require companies to disclose in the notes to the audited financial statements the costs, expenditures, and losses associated with severe weather events, and the financial effects of the company's climate risk responses, including any adaptation, mitigation, transition strategy, or targets on its financial statements.[79]

Grounding its approach on its core statutory rulemaking authority, the SEC emphasized throughout its final rule release that the rules are not intended to encourage or require any changes to corporate governance practices or to promote corporate climate action in

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73. *Id.* at 21,915, Item 1502(a)–(c).

74. *Id.* at 21,864, 21,916, Item 1503.

75. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,916–18, Item 1505–06. Scope 3 emissions were eliminated in the final version of the rules.

76. *Id.* at 21,713, 21,716.

77. *Id.* at 21,713.

78. *Id.* at 21,915–17, Item 1502, 1504 & 1505. If scenario analysis identified material climate impacts, the parameters and results of the analysis would need to be disclosed. *Id.* at Item 1502(f).

79. *Id.* at 21,779–80 (regarding art. 14 on financial impact metrics, expenditure effects, and changes to financial estimates and assumptions under Regulation S-X). *Cf. IFRS SI*, *supra* note 10, at para. 34–40 (regarding disclosures on current and anticipated financial effects of sustainability risks and opportunities); ESRS 2025, *supra* note 8, at ESRS 2, para. 23 (former para. 47) & 25, 27 (requiring similar disclosures of the financial effects of sustainability impacts, risks, and opportunities).

any form.[80] Nonetheless, it is difficult to see how a company can assess the nature and materiality of "actual and potential" climate-related financial risks and their economic effects for the benefit of investors without bringing such processes at all under the oversight of the company's board or its senior executives, and without engaging the company's risk management function. Under the SEC rules, once the company elects to do so, it would be obligated to provide the further TCFD-based disclosures regarding the climate governance roles of the board and management so that investors can assess how these governance functions are being carried out.[81] Even the SEC's more limited climate disclosure rules, therefore would, if implemented, have important effects on corporate governance practice.[82]

3. The ISSB Standards

The ISSB introduced two standards, which took effect in January 2024: a climate reporting standard (IFRS S2) and a broader sustainability reporting standard (IFRS S1).[83] These standards have been endorsed by the G20 and the International Organization of Securities Commissions (IOSCO) as the global reporting baseline upon which the ESRS and other local standards may impose additional requirements,[84] and they apply wherever the International Financial Reporting Standards (IFRS) have been adopted for financial reporting purposes.[85] The ISSB standards build on the TCFD's four-pillar framework and adopt a "single materiality" standard centered on the information's financial significance to the company.[86]

Despite its single materiality approach, the ISSB sees both climate- and sustainability-related risks as "inextricably linked" to the relationship between the entity and its *stakeholders and the natural environment* [*emphasis added*] "throughout its value chain," which

80. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,713, 21,716.

81. *See* SUSTAINABILITY ACCOUNTING STANDARD BOARD, CLIMATE RISK TECHNICAL BULLETIN 5 (2021) (reporting that 68 of 77 industries covered by its materiality standards are exposed to climate-related financial risk). As I have previously observed, it is doubtful that publicly traded companies of any size can afford to keep climate risk entirely out of the risk management function or the board's oversight purview, much less to so state in an annual report. *See e.g.*, Virginia Harper Ho, *Climate Disclosure Line-Drawing & Securities Regulation*, 56 U.C. DAVIS L. REV. 1875 (2023).

82. The key question in the litigation was whether the statutory authority of the SEC to regulate information disclosure in the securities markets includes the power to adopt climate-related disclosures. *Supra* notes 14–15. While consideration of the scope of the SEC's statutory authority is beyond the scope of this Article, suffice it to say that SEC has previously adopted disclosure rules for internal disclosure controls and has required reporting on corporate governance mechanisms, so these indirect governance effects are well within the scope of the SEC's traditional authority. Harper Ho, *supra* note 30.

83. *Supra* note 9 and accompanying text.

84. The EU and ISSB drafted their rules to support maximum "interoperability" and have adopted guidance for this purpose. *See* EFRAG & IFRS FOUND., ESRS-ISSB STANDARDS INTEROPERABILITY GUIDANCE (2024), https://www.ifrs.org/content/dam/ifrs/supporting-implementation/issb-standards/esrs-issb-standards-interoperability-guidance.pdf [https://perma.cc/M48Z-L7RS].

85. Media Release, IOSCO, IOSCO Endorses the ISSB's Sustainability-related Financial Disclosure Standards (July 25, 2023), https://www.iosco.org/news/pdf/IOSCONEWS703.pdf [https://perma.cc/87J3-4TA8].

86. *IFRS S1*, *supra* note 9, at para. 18 ("[I]nformation is material if omitting, misstating or obscuring that information could reasonably be expected to influence decisions that primary users of general purpose financial reports make on the basis of those reports, which include financial statements and sustainability-related financial disclosures and which provide information about a specific reporting entity."). Risk materiality is assessed based on its nature or magnitude" or both. *IFRS S1*, *supra* note 9, at para. 14, 17–18.

again includes the company's supply chain and business partners, as well as its customers.[87] The ISSB standards therefore require companies to identify and report, in addition to material climate-related financial risks and opportunities, the climate and sustainability risks that could "reasonably be expected to affect [their] prospects" based on the material sector-specific factors and measures originally developed by the Sustainability Accounting Standards Board (SASB)/Value Reporting Foundation to align with the U.S. federal definition of materiality.[88]

With respect to GHG emissions, the ISSB standards require companies to report Scopes 1, 2, and 3 emissions, regardless of their financial materiality.[89] Again, Scope 3 concerns value chain emissions, which requires companies covered by the ISSB to engage suppliers, customers, and other value chain stakeholders. Companies are not required to set any GHG emissions targets, adopt a climate transition plan, or to mitigate climate risk. However, the disclosure standards establish an expectation that companies will do so and that if they do, they will report relevant metrics so that investors can monitor those efforts.[90]

Making the TCFD's governance recommendations mandatory, the core of the ISSB standards is required disclosures on corporate governance processes and structures. Specifically, companies must discuss the governance bodies responsible for climate (and sustainability) risk oversight, as well as describing how they "monitor, manage and oversee" climate risk and their "processes, controls and procedures" for doing so.[91] Covered companies must also make a qualitative assessment of their climate resilience,[92] indicate whether they utilize sustainability-related performance measures for remuneration,[93] and explain how material climate risks affect their "business model" and "value chain," including their financial position, performance, and cash flows over time.[94]

Companies must also disclose how they respond to material climate and sustainability risks and opportunities in their strategy and decision-making and how their strategy to manage those risks is expected to affect financial performance, cash flows, and capital allocation.[95] Companies must further indicate how sustainability risks and opportunities affect decisions on major transactions, as well as any "tradeoffs" they have considered when making operational and investment decisions as between different stakeholder

87. *IFRS S1*, *supra* note 9, at para. 2. For the ISSB's definition of "value chain," see *id.* at 24 & App. A.

88. Under the ISSB standards, users must reference the SASB sector-specific standards and may also consider other internationally recognized standards, such as the Climate Disclosure Standards Board (CDSB) water- and biodiversity-related disclosures. *IFRS S1*, *supra* note 9, at para. 54–55. In 2023, the ISSB adapted the SASB standards for international use. IFRS, *International Applicability of the SASB Standards*, https://www.ifrs.org/projects/completed-projects/2023/international-applicability-of-the-sasb-standards/ [https://perma.cc/VEK6-NHEL].

89. *IFRS S2*, *supra* note 9, at para. 29–32.

90. As is true of all the TCFD-based standards, once companies set a target, they must disclose the parameters and measures used to assess progress and must report progress against self-identified baselines. *See e.g.*, *IFRS S1*, *supra* note 9, at para. 45, 51; *IFRS S2*, *supra* note 9, at para. 6(iv).

91. *IFRS S1*, *supra* note 9, at para. 26–27(b), 44(b); IFRS *S2*, *supra* note 9, at para. 5, 6(b), 10, 24–26.

92. *IFRS S1*, *supra* note 9, at para. 41–42; *IFRS S2*, *supra* note 9, at para. 9, 22. Climate scenario analysis is encouraged but not required. *Id.*

93. *IFRS S1*, *supra* note 9, at para. 27(a)(v).

94. *IFRS S1*, *supra* note 9, at para. 32, 34 (regarding sustainability risks); *IFRS S2*, *supra* note 9, at para. 10, 13 (regarding climate risks).

95. *IFRS S1*, *supra* note 9, at para. 32–35.

constituencies.[96] Companies must discuss any policies they have or actions they have taken to adapt to or mitigate material climate risk to the company or to take advantage of any climate-related opportunities, but they are not affirmatively required to take any such actions.[97]

4. The European Sustainability Reporting Standards (ESRS).

The ESRS are the sustainability reporting standards that have been developed to implement the EU's Corporate Sustainability Reporting Directive (CSRD).[98] Corporate reporting under the ESRS began in 2025 for fiscal year 2024 data for the largest listed firms (i.e., so-called first wave reporters), but the European Union delayed or simplified reporting requirements for other covered firms in its 2025 amendments to the CSRD and its 2025 revisions to the ESRS.[99] These reforms reduce reporting obligations for covered firms and the number of firms that are within scope, but they do not alter the basic reporting and corporate governance dimensions of the CSRD or the ESRS as initially adopted. [100] The following discussion the November 2025 (final) amendments to the ESRS. As amended, the ESRS still sets a higher bar for corporate transparency and climate governance than the other TCFD-based standards discussed here.

Like the ISSB, the ESRS follow the TCFD structure, but in contrast to the ISSB, the ESRS use a broader "double materiality" standard[101] that requires companies to monitor not only the company's own financial risks and opportunities (i.e., inward-facing) but also its impacts across its "upstream" (direct) and "downstream" (indirect) value chain and across ten topical areas (i.e., outward-facing).[102] While our focus here is limited to their climate disclosure requirements, the ESRS extend beyond reporting of Scopes 1, 2, and 3 GHG emissions and climate risk to reach other sustainability "impacts, risks and opportunities" (IROs) the company identifies as material, including biodiversity, pollution, water

96. *Id.* at para. 27(a)(iv), 33, 35 (including examples of possible tradeoffs between environmental impacts of operations and expected employment benefits of the activity).

97. *IFRS S2*, *supra* note 9, at para. 14.

98. CSRD, *supra* note 8. The CSRD is part of a package of regulations aligned with European sustainability and climate policies, as reflected in the EU Green Deal and the EU Climate Law among others. *Id.* at preamble para. 1.

99. *Omnibus*, *supra* note 8. The EU's "Stop-the-Clock Directive" entered into force on April 17, 2025, delaying reporting obligations for many firms within scope. Directive (EU) 2025/794 of the European Parliament and of the Council of 14 April 2025 amending Directives 2013/34/EU & (EU) 2024/1760 as Regards Certain Corporate Sustainability Reporting and Due Diligence Requirements, O.J. (L).

100. References in this Part are to ESRS 2025, *supra* note 8, and also indicate the ESRS 2023 provisions they amend.

101. ESRS 2025, *supra* note 8, at ESRS 1, para. 22 (former para. 21) & para. 36 (defining "double materiality" as having 'two dimensions: impact materiality and financial materiality" and providing that a matter is material if it is material from either an impact or financial materiality perspective). *See also id.* at Annex II, tbl.2 (defining 'impact materiality" and "financial materiality"). The 2025 ESRS clarify how companies should assess the materiality of their external impacts, including the effects of any mitigation or prevention measures they have undertaken. *Id.* at ESRS 1, para. 36–45.

102. *Id.* at ESRS 1, para. 46–51 (former para. 25–26) (regarding materiality assessment) & para. 61–74 (former para. 62–66) (regarding value chain and entity reporting); *id.* at ESRS 2, para. 19–33 (former para. 46–49) (regarding the interaction of material impacts, risks, and opportunities with strategy and the business model); *id.* at ESRS E1, para. 37 (former para. 64–70) (regarding the financial effects of material climate risks).

resources, and five other environmental, workforce and business conduct standards.[103] Companies are required to report only material information, but again based on a double-materiality test.[104] Indeed, under the ESRS, identifying corporate externalities (i.e., impacts) is the default starting point for the company's broader materiality assessment, which is also informed by assessing physical and transition risk exposure and the company's resource dependencies.[105] In contrast to the other three climate reporting standards, the ESRS takes the position that climate risks will be material for all firms at some point in time, so if companies do not identify any climate risks as material from either a financial or an impact perspective, they must provide a basis for that conclusion.[106]

Because many of the ESRS were drafted to conform to legal requirements already in force in Europe that may not apply elsewhere,[107] they are more prescriptive and broader in scope than the other standards with regard to corporate governance requirements. However, the ESRS do not aim to alter fiduciary duties that apply under existing law and that vary across the EU Member States, nor do they attempt to change corporate behavior directly, except where necessary to align with EU climate legislation or other EU law.[108]

Since the ESRS require companies to focus on climate *impacts* under the double-materiality approach, corporate decision-making and governance mechanisms must identify and monitor corporate climate externalities, even though the ESRS do not directly require specific oversight processes or due diligence measures, which are the focus of the EU's CSDDD.[109] However, the reporting company must discuss its due diligence process, and covered companies must ensure that their "administrative, management and supervisory bodies" have responsibility to "monitor, manage, and oversee" material "impacts, risks, and opportunities" (IROs),[110] and that they have established risk management and internal controls for climate (and sustainability) disclosure.[111] In addition, companies must describe

103. ESRS 2025, *supra* note 8, at ESRS 1, App. A (former ESRS, *supra* note 8, at Annex 1). On GHG emissions reporting, see *id.* at ESRS E1, para. 28–30 (former para. 44–55).

104. *Id.* at ESRS 1, 3.1, para. 22 (former para. 21) & para. 24 (new) (providing that "[i]nformation is material when omitting, misstating or obscuring that information could reasonably be expected to influence: (a) decisions that primary users of general-purpose financial reports make based on those reports, including financial statements and the sustainability statement, relating to providing resources to the undertaking; or (b) decisions, including informed assessments, that other users of 'general-purpose' sustainability statements make based on the sustainability statement regarding the undertaking's material impacts, risks and opportunities and how the undertaking manages them.").

105. *Id.* at ESRS 1, para. 36, 43, 49–50 (former para. 40); *id.* at ESRS E1, para. 37–41. Materiality of risks and opportunities is to be assessed in single-materiality terms based on their probability and magnitude. *Id.* at ESRS 1, para. 51.

106. ESRS 2025, *supra* note 8, at para. 37(b) (former para. 57).

107. *Id.* at ESRS 2, App. A (former App. C) (listing "datapoints in cross-cutting and topical standards that derive from" other EU law).

108. *See id.* at ESRS 1, para. 6 (providing that the "ESRS do not mandate behaviour" except related to reporting or as imposed by applicable law) & para. 58 (on due diligence).

109. *Id.* at ESRS 2, para. 15–16 (former para. 31–33); CSDDD, *supra* note 8, at art. 5–16. Under the Omnibus I reforms, the CSDDD has been substantially simplified to adopt a risk-based due diligence approach with more limited information requests required from business partners than under the former comprehensive value chain due diligence approach. *Supra* note 8 and accompany text.

110. ESRS 2025, *supra* note 8, at ESRS 2, para. 11–12 (former para. 20–26).

111. *Id.*at ESRS 2, para. 17–18 (former para. 35–36) (regarding management and internal controls processes for sustainability reporting).

the processes they have established to identify and assess the materiality of their IROs across all ten topical areas, including biodiversity risks.[112]

While not extending to all corporate decisions, the ESRS further require companies to disclose how these material IROs are taken into account in strategy, in risk management, and in decision-making on major transactions, including whether any stakeholder tradeoffs have been considered.[113] Companies covered by the ESRS must also discuss how their strategy, business model, and value chain relate to or affect material climate (and sustainability) IROs, and to do so with regard to both stakeholder impacts and current and anticipated financial effects across their "value chain."[114] Finally, companies that identify material climate risks are not directly obligated to take steps toward climate resilience, but they must at least conduct climate resilience analysis, identify necessary responses, and explain how their current and planned mitigation and adaptation affects climate resilience.[115]

A critical and distinct feature of the European standards is that they require covered companies to not only address climate-related financial risk but to actively "manage" and in some cases, mitigate, corporate climate externalities. Indeed, the stated purpose of the disclosures is to help shareholders and other users understand "how companies manage the prevention, mitigation or remediation" of material actual and potential" negative external impacts and "how they manage" the company's material climate risks and opportunities, including sustainability IROs covered by the other nine ESRS topical areas.[116] Under the core ESRS 2 disclosure requirements, all companies must disclose *how* they manage material climate IROS, either individually, or at the entity or consolidated group level, though the ESRS do not affirmatively require that they do so, nor specify in what manner.[117] In addition, companies that do *not* adopt relevant "policies, actions, and targets" to "address" material climate impacts or climate-related financial risks at all must directly state this.[118] More detailed disclosure of what the company is doing or planning to do must be made if the company has voluntarily or under separate legal obligation implemented climate "policies, actions, metrics, and targets" (PAMTs), allocated significant financial resources to achieve them, or used any metrics to manage and evaluate actions taken to address material IROs.[119] If a target has been set, which may be required by separate law, the ESRS anticipates that the company's governing board or senior executives will have a role in overseeing progress to achieve it, again linking corporate governance mechanisms directly with

112. *Id.* at ESRS 2, para. 34–35 (former para. 52–53).

113. *Id.* at ESRS 1, para. 32 (as amended); *id.* at ESRS 2, para. 12(e) (former para. 26(b)).

114. ESRS 2025, *supra* note 8, at ESRS 2, para. 19–20, 23–33 (former para. 38–42, 46–49) (regarding assessment of current and anticipated financial effects).

115. *Id.* at ESRS 1, para. 17–18 (former para. 19).

116. *Id.*at ESRS 2, para. 3 (new), para. 41–42 (former para. 64–65), para. 44–46 & AR 38 (former para. 67–69) (regarding key actions and resources, including those used to mitigate environmental harm); *see also id.* at ESRS 1, para. 60 & AR33 (regarding actions in response to due diligence).

117. *Id.* at ESRS 1, para. 3 (new); *id.* at ESRS 2, para. 2 (new).

118. ESRS 2025, *supra* note 8, at ESRS 2, para. 39 (former para. 62 & 72). As originally adopted, para. 62 required these disclosures, and therefore affirmative adoption of climate action, on a comply-or-explain basis.

119. *Id.* at ESRS 2, para. 29–44 (former para. 38–52), para. 46 (former para. 69) & para. 47–49 (former para. 74–77). The ESRS does not include sector-specific standards, but covered companies may reference the sector-specific SASB standards incorporated in the ISSB standards in adopting their own disclosures. *See id.* at ESRS 1, para. 11 (as amended) (referencing the ESRS 1 principles on fair presentation).

climate disclosure obligations.[120] All companies are required to disclose their energy consumption, reliance on carbon offsets, and any use of internal carbon pricing,[121] and whether they tie compensation to any climate or sustainability targets or not.[122]

Companies also have obligations to "address" material externalities where the company takes climate actions to manage risks and impacts that then cause negative impacts or risks with respect to other topics covered by the ESRS. Broader obligations arise to "prevent, mitigate, and remedy" because of the linkage between the CSRD and the CSDDD, which requires covered companies to engage in a due diligence process.[123] The ESRS also requires companies that have adopted a climate mitigation transition plan to state how they have reduced or plan to reduce GHG emissions and how they have adjusted their strategy and business model in accordance with it in order to align with the Paris Agreement and the European Climate Law.[124] Those without a climate transition plan must disclose "whether and if so, when" they will adopt one.[125] Finally, the ESRS require companies with due diligence obligations under the CSDDD to report on the outcome of those due diligence processes , including stakeholder engagement as well as impact prevention, mitigation, and remediation.[126]

Finally, in keeping with the double materiality approach, the ESRS require the highest degree of stakeholder integration in corporate governance of all of the standards discussed here, [127] even though they do not affect the governance rights of shareholders or stakeholders (such as employees) under the company law of the Member States.[128] Covered

120. *Id.* at ESRS 2, para. 12(d) (formerly para. 22(d)); *id.* at ESRS E1, para. 11(a).

121. *See also* ESRS 2025, *supra* note 8, at ESRS E1, *supra* note 8, at para. 24–36 (former para. 36–39, 44–45, 57, 63).

122. *Id.* at ESRS 2, para. 13–14 (former para. 27–29) (regarding compensation incentives). Once any adaptation or mitigation targets are established, companies must identify specified measures and timeframes for achieving those targets and report progress against them. *Id.* at ESRS 2, para. 50–51 (former para. 79-80); *see also id.* at ESRS E1, para. 19–23 (former para. 24–34) (regarding specific disclosures on climate change IROs and PAMTs).

123. Prior to the Omnibus I reforms, *supra* note 8, Article 22 of the CSDDD also required covered companies to develop and report on their climate mitigation transition plans. Although this requirement was abandoned in 2025, ESRS disclosure obligations still apply for companies who have adopted transition plans. ESRS 2025, *supra* note 8, at ESRS E1, para. 13–15 (former para. 15–17) (regarding transition plans).

124. *Id.* at ESRS E1, para. 10–12 (former para. 15–17).

125. *Id.* at ESRS E1, para. 12 (former para. 17).

126. *Id.* at ESRS 1, para. 57–60 (former para. 58–60); *see also id.* at ESRS 2, para. 15–16 (former 31–32) (requiring a sustainability due diligence statement). Under the CSDDD, *supra* note 8, covered companies bear separate due diligence obligations that include obligations to remedy any identified harms across their value chains. CSDDD, *supra* note 8, at art. 5(1)(d) & art. 12. However, the CSRD does not require covered companies to change their due diligence practices. *See* ESRS 2025, *supra* note 8, at ESRS 1, para. 58 (as amended).

127. ESRS 2025, *supra* note 8, at ESRS 1, para. 43 (former para. 24) ("The results of engagement with affected stakeholders carried out in the context of ongoing sustainability due diligence activities is a key input to the impact materiality assessment."). Under these standards, "stakeholders" are defined as those "who can affect or be affected by the [company]," which includes both investors and other intended users of sustainability reports. *Id.* at Annex II ESRS Standards.

128. Proposals had been advanced to strengthen stakeholder governance by directly imposing a duty of care on directors at the EU level to carry out the CSDDD's due diligence obligations with respect to environmental and human rights harms, but the proposal was widely criticized and ultimately rejected. CSDDD, *supra* note 8. On the proposed expansion of directors' duty of care to require them to take account of stakeholder interests and impacts, and some of the key objections raised, see generally Mark J. Roe et al., *The European Commission's Sustainable Corporate Governance Report: A Critique*, 38 YALE J. REG. BULL. 133 (2021).

companies are obligated to disclose "how" stakeholder interests and views inform the company's strategy and business model, reach its governance bodies,[129] and inform its materiality assessment and due diligence processes.[130] The ESRS emphasize that harm to stakeholders, including nature-related dependencies and biodiversity loss, consumption of constrained resources, and workforce impacts, are also potential sources of material reputational, regulatory, and legal risks for the company that in turn can give rise to new financial risks and effects, and to further externalities.[131] Finally, any materiality assessments and climate action should extend to the company's value chain, though the 2025 rules provide reliefs that cabin how far reporting and monitoring obligations should reach.[132]

B. Disclosure as a Driver of Corporate Governance & Behavioral Change

Thus far, we have seen that these disclosure regimes require transparency around material climate risks and also require companies to adopt or align internal corporate governance mechanisms to respond to them. The core argument here is that because corporate governance mechanisms are a subject of disclosure and also form the foundation or "scaffolding" of the rules, compliance with mandatory disclosure will directly or indirectly change corporate governance practices for covered firms. Indeed, corporate governance must adapt if investment-grade climate information is to reach the capital markets.

As many commentators recognize, climate disclosure mandates cannot substitute for direct regulation of corporate conduct to address the climate crisis,[133] not least because these mandates do not cover even all large firms. Moreover, reducing climate externalities is not an inherent goal of the single materiality regimes, and the degree of flexibility disclosure regimes need to address the cross-sectoral nature of climate risks and impacts and the practical data limitations reporting companies face both weaken their potential to incentivize climate action. Whether mandatory climate reporting leads companies toward better corporate climate governance and thus toward climate action will also depend, as in other areas of corporate governance, on the mix of mechanisms and incentives for investor

129. ESRS 2025, *supra* note 8, at ESRS 2, para. 21–20 (SBM-2) (former para. 44–45).

130. *Id.* at ESRS 2, para. 35(c) (IRO-1) (former para 53); *id.* at ESRS 1, para. 37& 43 (regarding the priority of stakeholders in materiality assessment); *id.* at ESRS 1, para. 43, 59–60 & AR 21, AR 33 (former para. 24, 58, 60–61) (stating that the due diligence process, including stakeholder engagement, is to be the basis for assessing the materiality of negative impacts).

131. *Id.* at ESRS 1, para. 15, 43, 46–51 (former para. 14, 24, 40, 47–51); *id.* at ESRS 2 & AR 21 (identifying nature as a "silent affected stakeholder") & AR 28 (former para. 50) (regarding nature dependencies).

132. ESRS 2025, *supra* note 8, at ESRS 1, para. 63–76 (former para. 63–71). The 2025 ESRS incorporate a "value chain cap" to limit the data that may be obtained from value chain parties and permit the use of estimates and information that is "reasonable and supportable" and "available without undue cost or effort." *Id.* at ESRS 1, para. 64 (former para. 63) & 67 (as amended). These determinations can be based on estimates as well as information covered companies obtain from direct business partners that is within the scope of the EU's voluntary rules for small and medium-sized enterprises. *A Competitiveness Compass for the EU*, COM (2025) 30 final (Jan. 29, 2025)

133. On these limits, see, e.g., Tobias Hans Tröger & Sebastian Steuer, *The Role of Disclosure in Green Finance*, 8 J. FIN. REG. 1 (2022); Robert G. Eccles, Vanessa Havard-Williams & Mark Manning, *The Limits of Reporting on Sustainability Impacts in Changing Corporate Behaviour*, 35 EUR. BUS. L. REV. 527 (2024).

engagement and whether the broader regulatory environment provides sufficient support.[134]

However, prior literature has shown that disclosure is nonetheless an important external corporate governance mechanism and a soft regulatory tool that can indirectly shape corporate conduct and managerial incentives and encourage self-regulation.[135] Stronger transparency around companies' climate governance practices themselves should increase corporate exposure to private and public enforcement, which may further motivate companies to improve climate risk oversight.[136]

In addition to the general behavioral incentives created by all disclosure regimes, it is important to clarify how the prescriptivity of particular climate governance rules is expected to affect corporate behavior. Some of the climate disclosure rules referenced above are flexible and may not in fact require any behavioral change from companies at all, while others will directly or indirectly require changes in corporate governance practice or in corporate climate risk responses depending on which of the following forms a particular rule takes. As Table 2 shows, the default position under the ISSB and ESRS is that climate governance processes and procedures must be adopted.[137]

- *Voluntary disclosure:* The weakest climate disclosure rules merely encourage companies to monitor and report climate risk without prescribing the content or manner of disclosure. The SEC's 2010 climate materiality guidance and the European Union's 2014 Non-Financial Reporting Directive are examples of this approach.[138] As discussed above, voluntary approaches are less likely to shift corporate behavior or address information asymmetries.[139]
- *Disclose whether (or if); Disclose "as applicable":* Beyond the level of guidance or broad requirements to report on certain matters where the form and manner is left to the reporting company, the weakest mandatory approach requires

134. As Dorothy Lund and Elizabeth Pollman have observed, institutional systems are strongly aligned to support shareholder primacy. *See generally* Lund & Pollman, *supra* note 6.

135. *See* Phillipp Krueger et al., *The Effects of Mandatory ESG Disclosure Around the World*, 62 J. ACCT. RES. 1795 (2024); Paul Ludwig & Remmer Sassen, *Which Internal Corporate Governance Mechanisms Drive Corporate Sustainability?*, 301 J. ENVT'L MGMT. 113780 (2022); Daniel C. Esty & Quentin Karpilow, *Harnessing Investor Interest in Sustainability: The Next Frontier in Environmental Information Regulation*, 36 YALE J. REG. 625, 636–38 (2019) (discussing environmental "information regulation" as a regulatory tool). *See also* Hans B. Christensen, Luzi Hail & Christian Leuz, *Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review*, 26 REV. ACCT. STUD. 1176 (2021) (discussing these mechanisms and their pre-conditions).

136. On the prospects for and limits of private enforcement, see *infra* note 174–75 and sources cited therein.

137. The 2025 ESRS makes this explicit and no longer include voluntary disclosures. EFRAG, *supra* note 8.

138. Commission Guidance Regarding Disclosure Related to Climate Change, 75 Fed. Reg. 6290 (Feb. 8, 2010); Council Directive 2014/95, of the European Parliament and of the Council of 22 October 2014 Amending Directive 2013/34/EU as Regards Disclosure of Non-Financial and Diversity Information By Certain Large Undertakings and Groups, 2014 O.J. (L 330).

139. IOSCO, Report on Sustainability-related Issuer Disclosures FR04/21 (June 2021) (identifying reporting gaps from the lack of mandatory reporting and supporting the development of a global sustainability reporting system under the IFRS Foundation); Tania Pantazi, *The Introduction of Mandatory Corporate Sustainability Reporting in the EU and the Question of Enforcement*, 25 EUR. BUS. ORG. L. REV. 509 (2024) (discussing the weakness of the voluntary EU Non-Financial Reporting Directive); *see also* CSRD, *supra* note 8, at preamble para. 14 (identifying the negative effects of voluntary disclosure on investment decision-making, capital allocation, systemic risk, corporate accountability, and shareholder and stakeholder engagement).

companies to make a disclosure about a specific corporate governance practice only *if* they have adopted it (i.e., "if any") or "if applicable." This is the approach primarily adopted by the SEC's climate disclosure rules in order to make clear that the SEC's regulatory objective was to require reporting of material climate-related information, not to promote any change in corporate behavior. [140] Companies may choose to adopt the practice independently, perhaps to make a voluntary pledge, or if under separate legal obligation to do so (for instance, by another jurisdiction), but otherwise they need not adopt the described governance practice. These rules are therefore not strong mandates *for* affirmative adoption of a given practice (and likely to the contrary), but they are critical in reducing unsupported greenwashing in connection with voluntary claims and commitments and should be powerful deterrents for such behavior.[141]

Materiality qualifiers used in all the reporting standards operate in a similar fashion; companies are only required to report *if* they determine that the matter is material. Even where the rule does not require an affirmative denial, investors may reasonably conclude that silence in response to a mandatory disclosure rule of this sort is either non-compliant (i.e., if a company that has the practice is silent) or that the company is making an affirmative representation that the practice has not been adopted.[142] Under the 2025 revisions to the ESRS, for example, the default rules is that detailed disclosure on "policies, actions, and targets" need only be made if they have been adopted.[143]

- *Comply-or-explain:* A stricter approach, widely adopted in jurisdictions with corporate governance codes, requires companies to either report their compliance with a stated practice or to explain why they are non-adopters. In some cases, they must explain *when* they will be in compliance, as is the case for climate mitigation transition plans under the ESRS.[144] Comply-or-explain rules are not voluntary, but these soft mandates have been found to raise the level of adoption of a given practice.[145] This approach is rarely used in the 2025 ESRS and the ISSB standards, as they seek to set direct mandates.
- *Comply to disclose:* The most important approach with regard to corporate climate governance mechanisms, and one reflected in the corporate governance elements

140. An exception is the board disclosure rule, which is worded as a direct mandate, but the SEC's adopting release emphasized that only boards engaging in climate risk oversight must make the required disclosure. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,713 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

141. *See e.g.*, Harper Ho, *supra* note 81; *see also* Eccles, Havard-Williams & Manning, *supra* note 133, at 547 (discussing the need to back voluntary commitments as a "crunch point for companies" who now will need to deliver on their promises).

142. The ability to raise securities fraud claims on this basis has now been largely curtailed in the United States except with regard to registration statements. *See generally* Macquarie Infrastructure Corp. et al., v. Moab Partners, L.P., 601 U.S. 257 (2024).

143. ESRS 2025, *supra* note 8, at ESRS 2, para. 39–40.

144. *Id.* at ESRS E1, para. 12 (former para. 17).

145. *See generally* Virginia Harper Ho, *'Comply or Explain' and the Future of Nonfinancial Reporting*, 21 LEWIS & CLARK L. REV. 317 (2017) (surveying the literature). This same body of research shows greater compliance by adoption than by explanation and that the latter is rarely enforced by shareholders or regulators and tends to be less effective. *Id.* at 331–34.

> of the TCFD, ISSB, and the ESRS to varying degrees, is an implicit mandate where companies must implement a given process or practice in order to be able to describe its operation or otherwise comply with the disclosure mandate.[146] For example, all of these regimes other than the U.S. rules require some narrative disclosure to be made regarding the identity, nature, and responsibility of the governance bodies and management involved in climate risk assessment, oversight, and management, which presumptively must be implemented before the relevant disclosure can be made. Other examples include the disclosures under the ISSB standards about the effect of climate-related risks on corporate decision-making,[147] and the ESRS' mandatory disclosure "about the resilience of [the company's] strategy and business model regarding its capacity to manage its material risks."[148] Companies not wishing to admit that climate risk has *no* effect or that they fail to manage material risks would prefer to disclose in some form.

Whether these mandates in fact affect corporate conduct will of course depend on their implementation and enforcement.[149] In this regard, complete omissions of material information in the face of a "disclose any," "disclose whether," or comply-to-disclose rule are now more difficult to challenge in private litigation in the United States following the Supreme Court's 2024 decision in *Macquarie Infrastructure Corporation et al. v. Moab Partners, L.P.* [150] There the Court concluded based on the statutory language of Rule 10b-5(b) of the Securities Exchange Act of 1934 that a "pure omission," that is, silence without a statement that is allegedly rendering misleading by the omission, is not misleading for purposes of private securities fraud litigation under that section, even in the presence of a mandatory disclosure rule. [151] However, such an omission could still be the basis of public enforcement or of private litigation if misleading under the federal prospectus requirements.[152] In contrast, under the ISSB standards and the ESRS, omissions are only permitted

146. Certain elements of the ESRS are already mandatory for European companies under separate regulation, so the ESRS disclosures in these cases support pre-existing obligations. ESRS 2025, *supra* note 8, at App. C.

147. *IFRS S1*, *supra* note 9, at para. 33.

148. ESRS 2025, *supra* note 8, at ESRS 2 SBM3, para. 33 & ESRS E1, para. 17–18.

149. A survey of public and private enforcement of anti-fraud regulation under the securities laws is beyond the scope of this Article.

150. As a matter of U.S. law, material information must only be disclosed if there is a duty to do so. Basic, Inc. v. Levinson*,* 485 U.S. 224, 239 n.17 (1988) ("Silence, absent a duty to disclose, is not misleading . . . ."); Macquarie Infrastructure Corp. et al. v. Moab Partners, L.P., 601 U.S. 257, 265 (2024) ("Even a duty to disclose, however, does not automatically render silence misleading under Rule 10b-5(b).").

151. The *Macquarie* Court took the position that the defendant's complete failure to disclose known trends and uncertainties in the MD&A was a "pure" omission that did not render any affirmative statements misleading and so was not actionable under Rule 10b-5. *Macquarie*, 485 U.S. at 257.

152. *Id.* at 264–65 (distinguishing the fraud standard under Section 11 of the Securities Act of 1933 and recognizing the availability of public enforcement for Rule 10b-5(b) violations). Separate Supreme Court decisions have, however, created other obstacles for private plaintiffs alleging securities fraud under Section 11. *See* John C. Coffee Jr. & Joshua Mitts, *Can Section 11 Be Saved? 'Tracing' a Path to Its Survival*, 15 HARV. BUS. L. REV. 1 (2025) (discussing practical challenges presented by *Slack Techs, LLC v. Pirani*, 598 U.S. 759 (2023)).

in the face of an affirmative disclosure rule if their outcome would be immaterial or if certain exceptions or disclosure reliefs apply.[153]

C. The Thin & Thick Corporate Climate Governance Spectrum

As the preceding discussion shows, all the climate reporting mandates share the goal of standardizing climate risk information, all are based on the same underlying frameworks (i.e., the TCFD and the Greenhouse Gas Protocol), and all have corporate governance implications. However, the four regimes vary in their approach to corporate climate governance.

As the following discussion shows, corporate climate governance is therefore not a single construct but can best be represented as a spectrum ranging from "thin" to "thick" climate governance. Along this spectrum, each of the four sets of standards in Section A differs in its approach and scope. Table 2 sets forth the key differences among these regimes with respect to their governance and stakeholder-facing elements. The terms "thin" and "thick" here do not refer to any single element but rather to each system as a whole and to that system's position relative to the others. Finally, while the focus here is on climate governance, this analysis can also be extended to the similar sustainability governance aspects of the ISSB standards and the ESRS. Table 2 and the following discussion introduce a typology of thick to thin climate governance features that define this spectrum.

Overall, the SEC's suspended climate disclosure rules represent the narrowest, "thin" approach to corporate climate governance, while the ESRS represent the "thickest" approach, notwithstanding the "thinning" of the EU standards in 2025. The ISSB and California (TCFD) standards take an intermediate approach. Table 2 first identifies the "thin" corporate governance elements shared by all the climate disclosure regimes. The bottom of Table 2 then identifies the additional elements that make the California (TCFD), ISSB, and ESRS standards "thicker"—that is, more robust—in the level of climate governance they require.

As Table 2 shows, moving from the "thin" to "thicker" climate governance requires progressively stronger corporate governance mechanisms and potentially more expansive corporate action to respond to material climate risks and impacts. The "thicker" regimes like the ESRS also happen to be those that embrace a broader scope of risks beyond climate risk and impose more extensive reporting requirements on the whole. However, the "thickness" of corporate climate governance here does not refer to the inclusion of additional sustainability factors beyond climate, nor to the length or complexity of the disclosure rules.

The most obvious distinction among the SEC, California (TCFD), ISSB, and EU approaches, presented here in order of "thickness," is how each approaches corporate externalities and stakeholder interests. Unlike the EU rules, the other three climate reporting standards adopt a single materiality approach that captures only financially material risks and impacts to the firm itself. Therefore, the corporate governance mechanisms or practices they endorse do not apply to corporate externalities other than GHG emissions, which again are both a measure of financial risk (i.e., transition risk) and also the clearest, most widely

153. ESRS 2025, *supra* note 8, at ESRS 1, para. 19–21, 24 (regarding fair presentation principles and materiality standards). Similar principles apply under the ISSB standards per International Accounting Standard (IAS) 8.8.

used measure of corporate climate externalities.[154] A second distinction concerns the scope or breadth of corporate governance practices that firms must adopt in order to comply. Compared to the "thinner" U.S. federal and state rules, the ISSB standards and the ESRS impose more expansive obligations on companies to adopt particular climate governance practices and in the case of the ESRS, to affirmatively manage or even mitigate climate risk. A third dimension of "thickness" concerns reporting boundaries—whether covered entities are only those typically included for accounting purposes on a consolidated basis, or whether risks or impacts in the company's value chain are also covered by the definition of materiality and the reporting obligations themselves. Finally, "thickness" includes the stringency of the reporting obligations, where more stringent rules may be expected to more directly affect corporate behavior. Prescriptive rules are more stringent than general principles, quantitative reporting is more stringent than qualitative or narrative reporting, and direct mandates are more stringent than comply-or-explain mandates or rules that merely encourage a given practice. Again, whether a reporting regime is "thinner" or "thicker" refers to the mix of these factors, in the aggregate.

Comparing the corporate governance elements of these regimes in this way offers practical and theoretical payoffs, even though a company may be subject to only one of them in a given jurisdiction. First, from a practical standpoint, there are many jurisdictions, as in the European Union, where the ISSB serves as a floor above which the ESRS and other local regulations may impose additional disclosure requirements with their own corporate governance implications.[155] Companies with significant business outside their home jurisdiction or those listed abroad may also be subject to more than one standard. Furthermore, from a theoretical and normative perspective, it is helpful to consider the effects of corporate climate governance in its most minimal form—the approach taken by the U.S. federal rules—and in a jurisdiction that has been a model for shareholder-centric governance reforms for nearly a century—the state of Delaware. This task is taken up in Part III below. Again, if the U.S. federal or state rules do not take effect in the near term, they still offer a useful guide for voluntary corporate practice and without doubt a foundation for future regulatory reforms.

154. TCFD, *supra* note 35.

155. EFRAG & IFRS FOUND., *supra* note 84.

Table 2: The Spectrum of Thin to Thick Corporate Climate Governance.

	Thin (Core) Climate Governance (SEC)	**Intermediate Climate Governance (California/TCFD)**	**Intermediate Climate Governance (ISSB)**	**Thick Climate Governance (ESRS)**
Risk scope	Climate only GHG Scopes 1 & 2, for certain large filers, if material	Climate only GHG Scopes 1, 2 & 3 and total emissions*	Climate & sustainability GHG Scopes 1 & 2 & 3 and total emissions, including value chain of consolidated entities	
Materiality	Financial materiality	Financial materiality & GHG emissions		financial & impact (double) materiality
Boundary scope	Consolidated reporting entity only	All firms doing business in California that meet the annual revenue thresholds, including value chain	Set by adopting jurisdictions, including value chain	Consolidated reporting entity, including value chain
Governance Elements				
Thin Governance Elements	Climate/ESG-related financial risk materiality assessment & monitoring required Assessment of actual and potential material risk impacts on strategy, financial planning, and capital allocation required Assessment of effects of current and anticipated financial effects of material risks on business model required GHG emissions monitoring and materiality assessment required Determination of whether to integrate material climate risks & financial effects into strategic and operational decision-making required Disclosure of material climate-related financial risks & GHG emissions required Disclosure of any internal carbon pricing, transition plan, risk-related targets, and scenario analysis, including parameters required			
Intermediate Governance Elements - In addition to the above **thin elements**				
Value chain climate risk & impact assessment		recommended	*required,* as to financial risks	*required,* as to financial risks and impacts (double materiality)
Climate risk oversight	encouraged for identified	recommended	*required* for identified	*required* for identified

Climate risk management	material climate risks		material climate risks	material climate risks, impacts, and opportunities
Climate risk-based decision-making		*required* as to implementation of the recommendations	Climate risk integration into strategy, decision-making,[156] and financial planning *required*	
	Thin (Core) Climate Governance (SEC)	**Intermediate Climate Governance (California/TCFD)**	**Intermediate Climate Governance (ISSB)**	**Thick Climate Governance (ESRS)**
Climate resilience testing	encouraged	recommended	*required*	scenario analysis *required* (comply-or-explain)
Board climate expertise	encouraged for identified material climate risks	recommended	Assessment of governance body available or needed climate skills and expertise *required*	
Intermediate Governance Elements cont. - In addition to the above **thin elements**				
Climate-integrated executive compensation		*recommended*	Climate & sustainability risk integration into compensation incentives *encouraged*	
Climate-informed ERM & financial controls		*recommended*	Climate & sustainability risk integration into internal financial controls *required*, into ERM function *encouraged*	Climate & sustainability risk integration into ERM function & internal financial controls *required*
Metrics & targets	*Required* only for GHG emissions and certain financial statement metrics	use and disclosure *recommended*	Use and disclosure *recommended* generally; *required* throughout under specific standards	
Climate transition plan		*encouraged*		transition plan for climate risk mitigation *encouraged*

156. Under the ISSB standards, the disclosing entity must enable users of the financial reports to understand how and when climate—and sustainability—related risks and opportunities affect decision-making. *See IFRS S1*, *supra* note 9, at para. 29(c), 33.

Thick Governance Elements - In addition to **all above thin and intermediate elements**				
Oversight of climate externalities			*encouraged*	Oversight of external climate & sustainability impacts across topical areas *required*
Climate-related due diligence & stakeholder engagement			*encouraged*	Due diligence processes *required* for climate impacts (and other covered impacts), including stakeholder engagement
Climate-resilient operations		*encouraged*	*encouraged*	Climate-resilient strategy and business model *required*[157]
Climate-related financial risk mitigation		*encouraged*	*encouraged*	if transition plan, then climate risk mitigation *required*
Climate impact (externality) mitigation			*encouraged*	If caused by climate action or as required by due diligence process. If transition plan, then GHG emissions reduction *required* If targets set, then progress reporting on climate & sustainability impact mitigation across topical areas *required*

*GHG emissions reporting in California is mandated by the Climate Corporate Data Accountability Act 2023, (2023) Cal. Stat. 382, as amended by (2024) Cal. Stat. 766.

1. Core Corporate Climate Governance Elements.

As Table 2 indicates, all four climate reporting standards include the following core corporate governance elements:

- *New Governance Mechanisms.* All four climate disclosure regimes incorporate new TCFD-based internal climate governance mechanisms, namely, transition

157. This obligation arises under ESRS 2025, *supra* note 8, at ESRS 2 SBM-3, para. 24, 33 & ESRS 1, para. 17-18as to material risks per CSRD, *supra* note 8, at art. 19(a).

plans and resilience testing against the Paris climate warming scenarios.[158] These are, however, voluntary under the "thinner" systems.

- *Climate-Related Financial Risk & GHG Monitoring & Materiality Assessment.* Like the internal controls reforms instituted in the early 2000s under Sarbanes-Oxley,[159] minimal compliance with any mandatory climate disclosure regime requires companies to establish internal processes to identify, monitor, and assess climate risk materiality. In contrast to voluntary ESG disclosure, all of the standards also require companies to measure and report the *financial effects* of material climate risks on the company, and to report at least Scopes 1 and 2 GHG emissions
- *Prioritizing Climate Risk.* All of these disclosure regimes prioritize climate as a focus of corporate risk assessment. They also require companies to specifically evaluate the strategic priority of climate risk to the firm relative to other risks, though companies may choose not to give climate risk higher priority than other risks.
- *Elevating Climate Risk Oversight to the Board Level.* Following the TCFD, all four standards also establish a normative position that the oversight of material climate risk management is a board responsibility. All of these TCFD-based standards expect key decisions regarding the company's risk response to be made by the board of directors or the highest governing body of the company.[160] For example, under all four regimes, companies who set climate targets must also report on how their corporate board is monitoring progress toward those targets.
- *Climate Risk Oversight & Risk Management.* Following the TCFD, all four standards also establish a new normative position that corporate boards of directors or senior management should monitor and manage material climate risks, although "thin" climate governance regimes only encourage companies to do so.
- *Climate-informed Decision-Making on Material Risk Response.* If any climate risks are material, all four standards require companies to make considered (and disclosed) decisions about whether to accept, manage, or reduce material risks or not, and whether to adjust the company's strategy and financial decisions accordingly. Companies with material climate risks must also decide whether to undertake any adaptation and mitigation measures, what priority material risks should have, and whether and how to incorporate them into enterprise risk management systems. Material climate risks must therefore be at least *considered* by management with respect to related strategic, capital allocation, and operational decisions. Critically, to achieve this requires climate risk measures to be incorporated into governance systems and internal disclosure controls.

158. Scenario testing is a core TCFD recommendation. It is required by the ESRS and encouraged by the ISSB. ESRS 2025, *supra* note 8, at ESRS 2, para. 24 (former para. 18–19), ESRS E1-2, para. 13–16 (regarding resilience and scenario analysis); *IFRS S1*, *supra* note 9, at para. 41–42.

159. *See, e.g.*, Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified as amended throughout sections of 11, 15, 18, 28 and 29 U.S.C.) (establishing internal control systems and imposing stringent financial reporting requirements). Other examples include risk governance disclosure introduced under the Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010) (codified as amended throughout sections of 12 and 15 U.S.C.).

160. To account for dual board structures adopted by some European firms, the ISSB and ESRS provide flexibility in this regard. *IFRS S1*, *supra* note 9, at para. 27(a) (referencing "governance body(s)"); 2025 ESRS, *supra* note 8, at Annex II ("administrative, management and supervisory bodies").

2. Additional Elements Found in Thicker Corporate Climate Governance Systems.

In addition to the corporate climate governance elements that all four climate disclosure regimes have in common, Table 2 shows that the three "thicker" corporate climate governance regimes also include additional corporate governance requirements that are generally mandatory, and that increase in stringency as one moves from the thinner TCFD-based California rules to the thicker ISSB and "thickest" ESRS rules. Once again, under the ESRS' double materiality approach, these same governance mechanisms apply both to risks to the company itself and to external corporate climate impacts.

- *Mandatory Climate Risk Management.* The ISSB's "intermediate" standards and the "thicker" ESRS *require* companies to affirmatively manage climate-related *financial* risks.[161]
- *Expanded Risk Oversight Scope.* In comparison to the SEC's approach, the California (TCFD) and ISSB standards and the ESRS all expand the scope of corporate risk oversight and management in multiple ways. First, with respect to risk oversight timeframes, materiality must be assessed over the short-, medium-, and long-term, giving investors a more complete picture of the company's climate risk assessment and potential tradeoffs between shorter and longer-term scenarios.[162] Second, with respect to boundaries, these regimes extend corporate oversight obligations beyond the consolidated reporting entity (i.e., the enterprise defined by equity control), to include the company's "value chain," which is critical to avoid risk-shifting and evasion.[163] Third, these three standards define climate risk to include energy and water resource consumption and other resource dependencies when assessing climate risk; companies must monitor resource consumption in order to do so. As with GHG emissions, monitoring and/or mitigating consumption may have financial costs and benefits but will simultaneously require a governance focus on the company's environmental footprint. As the ISSB standards and the ESRS make clear, climate-related financial risk cannot be separated from other environmental factors that concern both shareholders and stakeholders alike.[164]
- *Enhanced Climate-informed Decision-Making: Climate Strategy, Resilience & Transition Planning.* The ISSB and ESRS climate disclosure frameworks also require companies to develop strategies for climate resilience that are defined in terms of concrete metrics and targets and assessed over time.

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161. *See, e.g.*, ESRS 2025, *supra* note 8, at ESRS 1, para. 21(b) (information is material and must be disclosed when it is necessary to enable informed assessments and decision-making regarding the reporting entity's IROs and "how [the entity] *manages them*" (*emphasis added*)). For the ISSB and the ESRS, these extend to the specified sector- and topic-specific sustainability risks as well.

162. The SEC defines "long-term" as within five years, but five years is "medium-term" under the ESRS. ESRS 2025, *supra* note 8, at ESRS 1, former para. 80. The ISSB allows firms to define these timeframes. *IFRS S1*, *supra* note 9, at para. 30.

163. Even under the SEC rules that no longer require Scope 3 emissions disclosure from the "value chain," climate risk impacts on the firm should take account of potential effects on business partners. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,915, Item 1502(b) (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

164. *See* Harper Ho, *supra* note 81 (making this same observation with regard to the ISSB standards).

- *Monitoring & Mitigating Externalities.* Under the ESRS, companies must monitor climate (and sustainability) externalities (i.e., impacts) and their materiality. And while all TCFD-based regimes *encourage* adaptation and mitigation of material climate risks, the ESRS *requires* them to do so, at least in several aspects of the ESRS that link to the requirements of EU climate legislation and the CSDDD, for those companies within scope. Again, because the CSDDD requires due diligence efforts, the ESRS require companies to report on their efforts to prevent, mitigate, and remedy material negative climate (and sustainability) impacts.[165] Again, companies are also expected to take action to "address" any negative impacts arising from the company's actions to reduce or respond to climate and sustainability risks.[166] Prior to the EU's Omnibus I reforms, Article 22 of the CSDDD also required companies to adopt climate mitigation transition plans, including GHG emissions reductions and other climate mitigation action.[167]

3. Investor Climate Monitoring & Engagement.

One of the most obvious corporate governance implications of all these climate disclosure regimes is the support they provide to climate-focused shareholder monitoring and engagement. There are two general dimensions we may consider here. First, as former Delaware Supreme Court Chief Justice Leo E. Strine, Jr. has observed, corporations are unlikely to operate sustainably unless their shareholders do too.[168] To his point, these TCFD-based climate disclosure mandates apply to many of the financial institutions that are often themselves shareholders of other public and private firms.[169] Indeed, the G20 developed the TCFD precisely to respond to the lack of public information about the financial impacts of climate risk and to address potential systemic risks from climate blindness among financial institutions.[170] Leading markets globally, including the European Union and the United Kingdom, have already introduced entity and product-level monitoring of carbon emissions and certain portfolio-linked climate externalities for certain financial institutions.[171] Corporate climate disclosure mandates are necessary for these regimes

165. *Supra* note 128 and accompanying text; ESRS 2025, *supra* note 8, at ESRS 1, para. 52. Prevention and remediation requirements apply under the EU's corporate due diligence mandate. CSDDD, *supra* note 8, at art. 10–12.

166. ESRS 2025, *supra* note 8, at ESRS 1, para.52.

167. *Omnibus*, *supra* note 8.

168. Leo E. Strine, Jr., *One Fundamental Corporate Governance Question We Face: Can Corporations Be Managed for the Long Term Unless Their Powerful Electorates Also Think and Act Long Term?*, 66 BUS. LAW. 1, 1 (2010).

169. Of course, covered financial institutions may also have a monitoring role as creditors, insurers, or advisors.

170. *See generally* TCFD, *supra* note 35; *see also* TCFD METRICS & TARGETS, *supra* note 52 (providing standardized measures and industry-specific guidance for the financial sector).

171. Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 Nov. 2019, on sustainability-related disclosures in the financial services sector 2019 O.J. (L 317); Financial Conduct Authority (U.K.), *Sustainability Disclosure Requirements (SDR) and Investment Labels* Policy Statement PS23/16 (Nov. 2023), https://www.fca.org.uk/publication/policy/ps23-16.pdf [https://perma.cc/7LHC-QPQB] (introducing final rules). In 2022, the SEC also proposed mandatory climate risk disclosure for investment advisers and mutual funds to combat greenwashing in investment products and services. *See* Enhanced Disclosures by Certain Investment Advisers and Investment Companies About Environmental, Social, and Governance Investment Practices, 87 Fed. Reg. 36,654 (June 17, 2022). These were withdrawn under the Trump administration.

to function. Second, they support investor monitoring and engagement generally by improving investor access to comparable and more reliable corporate climate data on which voting and engagement decisions can be based. Though investors face well-recognized barriers in engaging portfolio firms around climate risk management and resilience,[172] these measures support investor climate risk monitoring and may have direct corporate governance effects on many of the largest investors themselves.[173]

In sum, all corporate climate governance regimes require climate-related factors typically thought of as stakeholder-facing to be integrated into corporate decision-making and governance mechanisms in some form. However, the extent to which this is mandatory and the extent to which companies must affirmatively take action to address identified climate risks and impacts increases along the climate governance spectrum as we move from thin to thicker approaches.

II. CORPORATE CLIMATE GOVERNANCE IMPLICATIONS

What then are the implications of corporate climate governance for corporate governance theory and practice? Part I has shown that even the thinnest versions of corporate climate governance introduce TCFD-based climate governance mechanisms and norms. They also reflect a stronger stakeholder-orientation than the United States and other shareholder-centric jurisdictions have been willing to embrace as a matter of corporate law. Corporate climate governance may therefore be more radical than has previously been understood.

Since corporate law scholarship, as well as corporate governance in the United States and abroad is heavily influenced by U.S. state corporate law in Delaware, Delaware law offers a useful starting point to consider how these new legal obligations for the largest firms globally will affect the "status quo" of corporate governance. And again, since the U.S. federal rules represent the "thinnest" approach to corporate climate governance, and there are practical and analytical benefits to considering the implications of corporate climate governance for corporate law and norms from this perspective, in much the same way as theoretical models often begin from the more simplified cases where key assumptions hold. This Part therefore focuses on the legal and normative implications of the Biden-era federal rules' "thin" corporate climate governance with reference to corporate law in Delaware. Some of the "thicker" corporate governance effects of the TCFD, ISSB standards, and the ESRS are also highlighted here, although a full consideration of how corporate climate governance engages corporate law in other jurisdictions is beyond the scope of this

172. *See generally* 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 (2013). *See also* Alex Edmans, Tom Gosling & Dirk Jenter, *Sustainable Investing in Practice: Objectives, Constraints, and Limits to Impact* (Eur. Corp. Governance Inst., Working Paper No. 1028/2024, 2024), http://dx.doi.org/10.2139/ssrn.4963062; Zohar Goshen & Assaf Hamdani, *Will Systematic Stewardship Save the Planet?* (Eur. Corp. Governance Inst., Working Paper No. 739, 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4605549. With regard to green finance and sustainability goals, see also Tröger & Steuer, *supra* note 133 (drawing cautious but positive conclusions about investor influence); Wolf-Georg Ringe, *Investor-led Sustainability in Corporate Governance*, 7 ANNALS CORP. GOVERNANCE 93 (2022); Tom Gosling, *Universal Owners and Climate Change*, 11 J. FIN. REG. 1 (2024) (assessing the challenges and pathways for investor influence).

173. *See supra* note 137 and sources cited therein.

Article. Table 3 outlines the key distinctions between conventional corporate governance and corporate *climate* governance.

Table 3. Conventional Corporate Governance Dimensions & Corporate Climate Governance.

Corporate Governance Dimensions	*Conventional Corporate Governance*	*Corporate Climate Governance*
Principal-Agent Focus[174]	Shareholder-management conflict Majority-minority shareholder conflict	Shareholder-management conflict Majority-minority shareholder conflict *Shareholder-stakeholder conflict*
Corporate Purpose & Management Decision Rules[175]	Long-term shareholder value Long-term firm value Enlightened shareholder value Enlightened value maximization Long-term shareholder wealth maximization	Long-term shareholder value Long-term firm value Enlightened shareholder value[176] Enlightened value maximization[177] Long-term shareholder welfare maximization *Long-term value creation (LTVC)*[178] *Long-term balancing rule*
Profit-Sacrificing to Address Climate & Sustainability Risks &	*Permitted* if value-enhancing or otherwise in the interests of shareholders	*May be required* to preserve assets, manage or reduce emissions and other climate risks, reach

174. On the expansion of principal-agent conflicts of relevance to corporate climate governance, see *supra* Part I.A, notes 150–53 and accompanying text.

175. On the overlap and extension of conventional conceptions of corporate purpose, see *supra* Part I.B–C, notes 154–80 and accompanying text.

176. On "enlightened shareholder value" (ESV), see Andrew Keay, *The Enlightened Shareholder Value and Corporate Governance*, 76 MOD. L. REV. 940 (2013); ANDREW KEAY, THE ENLIGHTENED SHAREHOLDER VALUE PRINCIPLE AND CORPORATE GOVERNANCE (2013); Virginia Harper Ho, *Enlightened Shareholder Value Beyond the Shareholder-Stakeholder Divide*, 36 J. CORP. L. 59 (2010). On the related concept of "shareholder welfare maximization," see Oliver Hart & Luigi Zingales, *Companies Should Maximize Shareholder Welfare Not Market Value*, 2 J.L. FIN. ACCT. 217 (2017).

177. On "enlightened value maximization," see Michael C. Jensen, *Value Maximization, Stakeholder Theory, and the Corporate Objective Function*, 22 J. APPLIED CORP. FIN. 32 (2010).

178. Dirk Schoenmaker & Willem Schramade define "long-term value creation" (LTVC) as a valuation approach that "optimizes financial, social, and environmental value subject to risk." DIRK SCHOENMAKER & WILLEM SCHRAMADE, PRINCIPLES OF SUSTAINABLE INVESTMENT 169 (2019).

Impacts[179]		resilience targets, or prevent, reduce, or remedy negative impacts
Risk Oversight & Risk Management[180]	Board discretion Goal to incentivize managerial risk-taking	*Climate-bounded* board discretion Goal to incentivize *climate risk moderation and mitigation*
Firm Strategy[181]	Climate-neutral and climate-blind *permitted*	Climate-focus *required*
Climate-informed Decision-making[182]	Discretionary	*Required*, where disclosure-relevant
Board Features[183]	Board composition, independence, and expertise requirements may apply	Board composition, independence, and expertise requirements may apply *Additional climate expertise and board process requirements may also apply*

A. Agency Costs & Climate Governance

At the outset, a basic implication of corporate climate governance is that it expands the scope of the agency conflicts that are the focus of corporate law and governance mechanisms in shareholder primacy jurisdictions. Historically, corporate governance in these systems has focused on reducing two primary agency conflicts: the conflict between shareholders and delegated management, and the conflict between the interests of majority and minority shareholders. But there is a third agency conflict—the shareholder-stakeholder conflict.[184] Corporate law in shareholder primacy jurisdictions has largely failed to address this third conflict and the other two simultaneously.[185] Yet this is precisely the challenge corporate climate governance raises.

179. On whether corporate climate governance is profit-sacrificing, see Part I.C, *supra* notes 173–75 and accompanying text.

180. On risk oversight and risk management from a corporate climate governance perspective, see *infra* Part II.D.

181. On firm strategy from a corporate climate governance perspective, see *id.*

182. On corporate climate governance and corporate decision-making, see *infra* Part II.E.

183. On the effect of climate disclosure regimes on board composition and qualifications, see *infra* Part II.F.

184. John Armour, Henry Hansmann & Reinier Kraakman, *Agency Problems and Legal Strategies*, *in* THE ANATOMY OF CORPORATE LAW: A COMPARATIVE AND FUNCTIONAL APPROACH 29 (Reinier Kraakman et al., eds., 3d ed. 2017) [hereinafter ANATOMY].

185. From the conventional position of corporate law theory, corporate externalities and the potential conflict between the interests of shareholders and stakeholders are not properly a concern of corporate law and are best resolved either by contract or by public regulation. Henry Hansmann & Reinier H. Kraakman, *The End of History for Corporate Law*, 89 GEO. L.J. 439, 449 (2001). As the Delaware Chancery Court reiterated in *McRitchie v.*

In a companion article, I show that this challenge can be met. That article makes the case that even thick variants of corporate climate governance can in fact overcome the infirmities that have been raised by opponents of stakeholder integration.[186] Here, the descriptive claim is that directing corporate governance toward accountability for climate-related financial risk, which even the thinnest climate disclosure regimes require, necessitates a greater stakeholder orientation from corporate boards and management. As explained further below, corporate climate governance, even in its narrowest form, therefore challenges certain aspects of corporate law in Delaware, as well as some of its normative underpinnings.

B. Reconsidering Corporate Purpose

Corporate climate governance also has implications for corporate purpose, and indeed, as other scholars have observed, the design of corporate governance rules in a given jurisdiction cannot be determined in isolation from it.[187] Specifically, by integrating stakeholder considerations, corporate climate governance potentially alters the normative standard against which management will be assessed—what is sometimes called the "corporate objective function."[188] Moreover, the question of "for what purpose" is also linked to the question of "for whom" is the corporation to be managed.[189] Any shift in how we understand corporate purpose therefore has direct "process" implications for fiduciary duties, managerial incentives, and board function, all questions considered below. Table 3 identifies common articulations of corporate purpose adopted in the literature and by the courts. In the following discussion I take no position on the question of whether corporate purpose should be reinstated as an accountability mechanism within corporate law, or as a matter of private ordering in corporate charters.[190] Instead, the focus here is to assess the compatibility of corporate climate governance with different conceptions of corporate purpose.

Zuckerberg, 315 A.3d 518, 573 (Del. Ch. 2024), "[t]o ask more from state-based corporate law is to pick the wrong tool for the job". *But see* Aneil Kovvali, *Stark Choices for Corporate Reform*, 193 COLUM. L. REV. 693 (2023) (rejecting this proposition).

186. Harper Ho, *supra* note 31.

187. MARC MOORE & MARTIN PETRIN, CORPORATE GOVERNANCE: LAW, REGULATION, AND THEORY 4–9 (2017).

188. *See, e.g.*, RESTATEMENT. CORP. GOVERNANCE, § 2.01 (AM. L. INST., Tentative Draft No. 2 2024), https://www.ali.org/publications/restatement-law/corporate-governance-rs [https://perma.cc/D4MW-9JEY] (on the corporate objective function). On the project and its goals, see Edward B. Rock, *The ALI's Restatement of the Law of Corporate Governance: A Reply to Professor Bainbridge*, 78 BUS. LAW. 451 (2023).

189. *See, e.g.*, Edward B. Rock, *For Whom Is the Corporation Managed in 2020? The Debate over Corporate Purpose*, 76 BUS. LAW. 363, 368 (2021). For an overview of the corporate purpose debates, see generally RESEARCH HANDBOOK ON CORPORATE PURPOSE AND PERSONHOOD (Elizabeth Pollman & Robert B. Thompson eds., 2021).

190. There are three dominant positions with respect to the role of corporate purpose in corporate governance. The first is that it is a signaling mechanism rather than a regulatory instrument. *See* Jill E. Fisch & Steven Davidoff Solomon, *Should Corporations have a Purpose?*, 99 TEX. L. REV. 1309 (2021). The second is that it is so essential that re-mandating purpose in corporate charters or through other means would serve an important corporate accountability function. *See* Colin Mayer, *The Governance of Corporate Purpose* (Eur. Corp. Governance Inst. Working Paper, Paper No. 609, 2021), https://ecgi.global/sites/default/files/working_papers/documents/mayerfinal_1.pdf [https://perma.cc/N59A-E2N2]; Colin Mayer, *The Future of the Corporation and the Economics of Purpose*, 58 J. MGMT. STUD. 887–901 (2021). Third, is that corporate purpose, defined as the economic function

How the fiduciary duties of corporate directors and officers are defined in a given jurisdiction lays the legal foundations for understanding corporate purpose. Based largely on Delaware common law precedent, long-term shareholder wealth maximization, subject to the general obligation to follow the law, has been advanced and generally accepted, in various forms, by legal scholars and economists as the proper purpose of the corporation.[191] Different jurisdictions have articulated this goal differently, and even in Delaware, the law behind the corporate purpose debates is to no small extent ambivalent.[192] The Delaware courts have increasingly sought to eliminate this ambivalence, as in the 2024 case *McRitchie v. Zuckerberg*, where the Delaware Chancery Court rejected any obligation of Meta's board to prevent or remedy corporate externalities unless required to do so by law.[193] The court stressed there that the directors' obligation is "to seek to maximize the long-term value of the corporation for the benefit of its stockholders."[194] Nonetheless, because of the deference afforded by the business judgment rule in Delaware, shareholder wealth maximization, variously understood, has generally been recognized in the literature and by the courts as a norm, not a mandate.[195]

To begin, corporate climate governance in its thin form is compatible with most shareholder primacy articulations of corporate purpose set forth in Table 3, including shareholder wealth maximization, the U.K.'s enlightened shareholder value (ESV) approach,[196]

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of the corporation, is already embedded in law and market mechanisms. *See* RESTATEMENT CORP. GOVERNANCE, *supra* note 188, § 2.01.

191. McRitchie v. Zuckerberg, 315 A.3d 518, 572–74 (Del. Ch. 2024); Rock, *supra* note 189. *See also* RESTATEMENT CORP. GOVERNANCE, *supra* note 188, § 2.01 (on the corporate objective function and these authorities).

192. The roots of this ambivalence lie in the courts' deference to management business judgment and in Delaware's director-centric governance rules, which give directors discretion to consider stakeholder interests. Delaware's ambivalence is widely observed. *See, e.g.*, CHRISTOPHER M. BRUNER, CORPORATE GOVERNANCE IN THE COMMON-LAW WORLD: THE POLITICAL FOUNDATIONS OF SHAREHOLDER POWER 53–65 (2013); Holger Spamann & Jacob Fisher, *Corporate Purpose: Theoretical & Empirical Foundations/Confusions*, *in* CORPORATE PURPOSE, CSR, AND ESG 55, 65–70 (Jens-Hinrich Binder, Klaus Hopt & Thilo Kuntz eds., 2024).

193. *McRitchie*, 315 A.3d at 574. However, the Chancery Court also rejected the "Chicago School" view that companies are free to violate the law when it is cost-effective to do so and stressed that Delaware corporations must pay attention to at least some externalities—those prohibited by law. *Id.* at 572.

194. *Id.* at 574.

195. *See* RESTATEMENT CORP. GOVERNANCE, *supra* note 188, § 2.01 (on the corporate objective function and these authorities). *See also* BAINBRIDGE, *supra* note 4, at 67 (observing that the "rule" is not a rule of decision, a standard of review, or a standard of liability but instead an abstention doctrine supporting the authority of directors under Delaware law).

196. "Enlightened shareholder value" is a concept introduced in Section 172 of the U.K. Companies Act (2006) which requires directors to "promote the success of the company for the benefit of its members as a whole" but in doing so to "have regard" for the interests of corporate stakeholders, as described in the statute. Companies Act 2006 § 172(1) (U.K.). This notion has much in common with mandatory constituency statutes in the United States but has not proven to have much teeth in enforcing the interests of creditors or other stakeholders as interpreted by the U.K. Supreme Court. *See, e.g.*, BTI 2014 LLC v. Sequana SA and others [2022] UKSC 25 (appeal taken from EWCA Civ. 112) (concluding that neither art. 172 or the U.K.'s statutory duty of care imposed direct obligations on directors toward creditors). On constituency statutes, see Lucian A. Bebchuk, Kobi Kastiel & Roberto Tallarita, *For Whom Corporate Leaders Bargain*, 94 S. CAL. L. REV. 1467, 1485–95 (2021). ESV has also been embraced by institutional investors and in investor stewardship codes that cover ESG matters. *See generally* Harper Ho, *supra* note 176 (discussing investor-driven enlightened shareholder value in the U.S. context).

and Hart and Zingales' "shareholder welfare maximization" rule.[197] This is because all of these variations—as under current Delaware law—*permit* corporate boards to voluntarily *consider* stakeholders and even to sacrifice profit for the benefit of stakeholders or otherwise in the public interest.[198] Under any of the climate disclosure regimes, covered firms that conclude climate risks are wholly immaterial are under no obligation to manage such risks and therefore remain free to maximize shareholder wealth however they see fit.

An important caveat is that even thin forms of corporate climate governance are not compatible with *short-term* profit maximization, for instance, maximizing the stock price as an overarching corporate purpose. This is because all climate disclosure mandates require climate risks and impacts to be monitored over both short- and long-term time horizons. However, most legal scholars do not understand maximizing a company's stock price or other short-term measures of value to be the proper articulation of corporate purpose and fiduciary duty under Delaware law.[199]

Nonetheless, all forms of climate corporate governance go beyond requiring firms to simply *consider* climate risk and either encourage companies (thinner versions) or require them (under thicker ones) to also *manage* material climate-related financial risks they identify in some manner. Because even managing climate risk may be costly, all these regimes are therefore potentially inconsistent with setting long-term shareholder wealth maximization as the corporate objective.

To see why this is so, let us consider the following three cases. Case 1—*climate-informed governance*—is the most minimal corporate response that could be made to comply with the "thinnest" variant of corporate climate governance represented by the dormant U.S. federal rules, and it is compatible with shareholder wealth maximization, as defined above. Case 2—*climate-responsive governance*—is encouraged by the U.S. federal and California (TCFD) rules and is required by the ISSB standards. Case 3—*climate-responsible governance*—is required for companies subject to the ESRS.

Case 1—Climate-Informed Governance. Were the U.S. federal rules to take effect, they do not directly mandate any change in corporate governance, so some U.S. listed companies, perhaps those with weak analyst coverage or customer influence,[200] could conclude that no climate risks are material during the reporting period. This would leave them free to ignore climate risks in board or management decisions that are unrelated to

197. Hart & Zingales, *supra* note 2. This version of shareholder primacy was rejected by the Delaware courts in *McRitchie v. Zuckerberg*, 315 A.3d 518, 551 (Del. Ch. 2024) (concluding that directors are not obligated to consider a stockholder's interests as a diversified investor, employee, or customer).

198. That directors may, as a matter of Delaware law, sacrifice profits in the public interest is not in question, so long as profit-sacrificing is "rationally related" to some benefits to shareholders. Revlon, Inc. v. MacAndrews & Forbes Holdings, Inc., 506 A.2d 173, 182 (Del. 1985). The case for profit-sacrificing in the public interest has been fully developed elsewhere, most notably by Einer Elhauge. *See generally* Einer R. Elhauge, *Sacrificing Profits in the Public Interest*, 80 N.Y.U. L. REV. 733 (2005). Some scholars have argued more strongly that under a less-famous principle of *Revlon* itself when there is a business case for benefiting stakeholders—that is, if investments to reduce carbon emissions, protect the environment, or retain employees contribute to shareholder (or firm) value—Delaware corporate directors and officers have a fiduciary obligation to make such investments so long as the company is not up for sale (i.e., "in *Revlon* mode"). Miller, *supra* note 5, at 775 n.4 (discussing this aspect of *Revlon* and similar language in In re *Trados, Inc. S'holder Litig.*, 73 A.3d 17, 40–41 (Del. Ch. 2013)).

199. *See* RESTATEMENT CORP. GOVERNANCE, *supra* note 188, § 2.01.

200. *See* Kobi Kastiel & Yaron Nili, *The Corporate Governance Gap*, 131 YALE L.J. 782, 815–21 (2022) (finding weaker corporate governance at such firms). Here we leave aside the possible effect of the more stringent "intermediate" TCFD-based rules in California.

risk materiality assessment and disclosure itself. Under this "thinnest" scenario, our hypothetical firm may be free to maximize short-term or long-term shareholder wealth as before and to make no operational changes at all. However, even under Case 1, covered firms under even the thinnest climate disclosure mandate would no longer be free to be wilfully "climate-blind."

Case 2—Climate-Responsive Governance. Climate-responsive governance is essentially an "enlightened shareholder value" definition of corporate purpose where corporate climate risk responses align with the interests of shareholders. In short, there is a "business case" for risk management or climate action. It is therefore compatible with maximizing either long-term firm or shareholder value (however defined), and it has a voluntary and mandatory variant.

The first variant is voluntary climate-responsive governance, which would be encouraged—but not required—under the "thin" U.S. federal rules for companies that identify at least *some* material climate-related financial risks, and for all covered firms under the California (TCFD) rules. These companies must not only inform themselves about climate risk, monitor GHG emissions, and assess climate risk materiality (Case 1) but they must also determine whether to manage those risks, since they are required to disclose this decision. Determining whether and how to respond to known material climate risks in this manner necessarily requires climate-related risks and their financial impacts on the firm to be brought within the purview of the firms' disclosure controls, and possibly into its risk management function and board oversight, in ways that extend beyond the current standard of conduct required of corporate directors and officers in Delaware. Those effects are considered further below.[201]

The second variant is mandatory climate-responsive governance of the sort required by the "thicker" ISSB standards and the ESRS. Firms covered under these standards are required to oversee and manage climate risk, monitor GHG emissions, and assess their own climate resilience.[202] In addition, they must include climate risks in business strategy and financial planning, and explain to investors how their response to climate risk affects financial performance, decisions on capital allocation and major transactions, and other stakeholders of the firm.[203] The mandate to manage climate risk for these firms requires integrating climate and other stakeholder-linked factors into corporate decision-making beyond the level required for Case 1 firms. However, firms may still choose to do so only to the degree there is a business case that can be made, so their compliance with reporting mandates should also align with defining the corporate objective function in terms of long-term shareholder value.

Case 3—Climate-Responsible Governance. In this final case, firms must pursue climate adaptation and decarbonization, take action to reduce GHG emissions and address climate-related financial risks, and potentially mitigate or remedy other negative externalities. These steps could be taken voluntarily by all firms, and are encouraged by the intermediate California (TCFD) and the ISSB standards. As discussed above, compliance with the EU's due diligence requirements will obligate covered firms to do so.

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201. *See infra* Parts II.C–D.

202. *See infra* Part II.C.

203. *Id.* Of course, for the ISSB and ESRS, this extends to material sustainability risks as well.

Compliance with some of these requirements may be profit-sacrificing or value-reducing even in the long-term.[204]

In sum, Cases 1 and 2 encourage climate risk management that is value-enhancing, where financial and climate resilience goals align. Again, there would be no obligation under either the *thin* corporate climate governance of the U.S. federal rules (Cases 1 & 2) or under the intermediate California (TCFD) or ISSB standards (Case 2) to sacrifice profit in order to respond climate risk. There is also a strong, even existential, economic argument for managing climate risk to *preserve* long-term firm or shareholder value since no company can survive in a post-carbon transition without it.[205] But while preserving or even generating value by investing in long-term resilience may well be in the long-term best interests of the corporation, as the OECD's corporate governance principles suggest,[206] it is not the same as *maximizing* firm or shareholder value.[207] To the extent that corporate climate governance requires climate action and investments in risk management, adaptation or mitigation, or addressing stakeholder tradeoffs (Cases 2 and 3), it is potentially incompatible with shareholder wealth maximization, even in the long run, given constrained resources and the scale of the climate crisis.

There is a final thorny issue underlying our analysis of how climate governance informs corporate purpose—this is the question of whether the purpose of the corporation is to operate for the benefit of the firm as a whole or for the benefit of its shareholders, which is related to the question of "to whom are fiduciary duties owed?". In Delaware, the answer to these questions have been variously, "the corporation, "the corporation and its shareholders," or simply, (common) shareholders as a class.[208] Courts and commentators alike have tended to interpret these formulations as synonymous, at least when viewed in terms of shareholders' long-term interests.[209]

Whether a distinction should be made between the interests of the corporation as an entity and the interests of its shareholders is not a purely theoretical question. As we have seen, corporate climate governance in its thicker forms imposes costs and therefore may require trade-offs between the interests of the firm in climate resilience and/or climate mitigation on the one hand, and the economic interests of common shareholders on the other. Moreover, a number of scholars have already observed that an entity-centric definition of purpose (i.e., "long-term firm value" or "long-term corporate value") gives more flexibility

204. While the broader literature is still developing, there is already some empirical evidence that *not* reducing GHG emissions may be value-enhancing even in the long-term, in which case *reducing* emissions as the ESRS requires would not be value-maximizing over any timeframe. Timo Busch et al., *Corporate Carbon & Financial Performance Revisited*, 35 ORG. & ENV'T 154 (2022). *See also* Gosling, *supra* note 172, at 11–18 (noting that portfolio alignment with the global warming targets of the Paris Accord may not be financially optimal).

205. There is empirical support for an "insurance effect" of corporate sustainability practices, which can enhance firm's ability to preserve value in the face of crisis. *See, e.g.*, Jing Lu et al., *Are Firms with Better Sustainability Performance More Resilient During Crises?*, 31 BUS. STRAT. & ENV'T 3354 (2022).

206. OECD, *supra* note 33, at 44.

207. For example, maximizing use of (cheap) land, water, and energy resources so long as there are no (enforceable) legal restrictions on doing so presently would be potentially wealth maximizing but for most firms inconsistent with managing (Case 3) or mitigating (Case 4) climate-related financial risk.

208. BRUNER, *supra* note 192, at 42–53.

209. RESTATEMENT. CORP. GOVERNANCE, *supra* note 188, § 2.01. *See, e.g.*, McRitchie v. Zuckerberg, 315 A.3d 518, 574 (Del. Ch. Apr. 30, 2024).

to corporate boards to consider stakeholders than one focused on common shareholders.[210] Identifying the entity itself as the focus of fiduciary duties is also arguably more consistent with the director-centric nature of corporate governance rules in Delaware, under which directors may make board decisions that benefit the corporation but not necessarily all shareholders, a point Blair and Stout emphasized in their seminal work on team-production theory.[211] Placing the corporation itself as the beneficiary of corporate fiduciary duties therefore aligns better with a wholistic and sustainability-oriented view of board fiduciary duties. At present, however, the Delaware courts have not signaled a willingness to meaningfully distinguish the interests of the corporation from those of the common shareholders as courts in other common law systems have been willing to do.[212]

C. Stakeholder-Integrated Decision Rules

One of the core rationales favoring shareholder wealth maximization as a statement of the corporate objective and the proper focus of corporate fiduciary duties is its utility as a lodestar and yardstick for corporate management.[213] Since we have just observed above that thicker forms of corporate climate governance, particularly Case 3, may be incompatible with even long-term shareholder (or firm) value maximization as a statement of the corporate purpose, we must consider further what decision rule(s) corporate climate governance implies or requires. In addition, the orthodox position among corporate law and finance scholars that shareholder wealth maximization is and should be the decision-rule for management has also been criticized as the root driver of negative environmental and

210. Leading work includes Lynn Buckley, *The Foundations of Governance: Implications of Entity Theory for Directors' Duties and Corporate Sustainability*, 26 J. MGMT. GOVERNANCE 29–53 (2022); Iain MacNeil & Irene-marié Esser, *From a Financial to an Entity Model of ESG*, 23 EUR. BUS. ORG. L. REV. 239 (2022); Andrew Keay, *Ascertaining the Corporate Objective: An Entity Maximization and Sustainability Model*, 7 MOD. L. REV. 663–98 (2008); ANDREW KEAY, THE CORPORATE OBJECTIVE: CORPORATIONS, GLOBALISATION AND THE LAW (2011).

211. Entity-centric fiduciary duties align well with a team production account of corporate law, which sees the corporate board as a "mediating hierarch" to balance the interests of shareholders and corporate stakeholders. Margaret M. Blair & Lynn A. Stout, *A Team Production Theory of Corporate Law*, 85 VA. L. REV. 247 (1999). Placing the firm as the one to whom fiduciary duties run is still compatible with the grant of governance rights *solely* to shareholders and with legal rules providing that certain other duties, such as a duty of disclosure, run solely to shareholders. Buckley, *supra* note 210, at 50 (arguing along these lines). *But see* BAINBRIDGE, *supra* note 4, at 68 (arguing to the contrary).

212. For example, an entity-centric approach already applies in Canada as a matter of common law. Re BCE Inc. v. 1976 Debentureholders, [2008] SCC 3 (Can.). There, directors are permitted but not required to consider the interests of a broad range of stakeholders when acting in the best interests of the corporation itself. Ontario Psychological Association v. Mardonet, [2016] 132 O.R. (3d.) 750 (ONSC). *See generally* Barnali Choudhury & Martin Petrin, *Stuck in Neutral? Reforming Corporate Purpose and Fiduciary Duties*, 67 CAN. BUS. L.J. 291 (2023).

213. Normatively, Michael Jensen has articulated the orthodox "spillover" policy rationale for a shareholder-primacy objective function, arguing that directing management to maximize the long-term market value of the firm is the clearest, most readily ascertainable, way in which to maximize the economic benefit of shareholders and other corporate constituencies. *See generally* Jensen, *supra* note 177. As others have observed, the stock price of listed firms offers a clear equity value measure, but at present there is no equivalent for societal or stakeholder welfare. Spamann & Fisher, *supra* note 192, at 70.

societal externalities.[214] Given this tension, I submit that corporate climate governance is instead more compatible with two other decision rules that may be equally efficient and that are implied and may be enforced by climate disclosure regimes.

Enlightened Shareholder Value. The first possibility is an "enlightened shareholder value" (ESV) rule that, like mandatory constituency statutes or like Section 172 of the U.K. Companies Act, requires corporate officers to consider stakeholder interests, as identified in the relevant rules, when engaged in decision-making in the interests of shareholders.[215] We have already observed above that even under the "thin" single-materiality frameworks like the SEC rules, companies that are within scope must *consider* climate risk in decision-making connected with corporate board oversight, risk management, strategy, and capital allocation (Case 2) or must integrate climate risk into decision-making more comprehensively (Case 3), thus bringing stakeholder considerations into corporate decision-making in some form.

Whether fiduciary duties require, encourage, permit, or prevent corporate director and officer consideration of stakeholder interests is answered differently across jurisdictions and has been a focus of significant attention among corporate scholars as one of the few corporate law mechanisms that may be directly engaged in reducing corporate climate change impacts.[216] However, in contrast to U.K.-style ESV and mandatory constituency statutes in the United States, the disclosure rules do not require climate factors to be considered in all corporate decisions, nor are corporate officers under any clear obligations to consider stakeholder interests of any sort, material or otherwise, as a matter of fiduciary duty under Delaware law. Furthermore, in practical effect, ESV decision rules have not proven to differ much from shareholder wealth maximization.[217] The upshot is that under thin corporate climate governance of the sort that would have been required by the U.S. federal rules, management of firms who have not identified any material climate risks (Case 1) have the discretion to ignore climate risks, and those who have identified material climate risks (Case 2) still have no obligation to take climate action, especially in the absence of a clear "business case" to do so. Although there is a strong business case for many firms to take action to reduce climate risk,[218] it is clear that the absence of transnational, consistently enforced legal limits on GHG emissions and other climate externalities means that climate risk management and/or mitigation will not be value-maximizing for all firms

214. *See generally* Christopher Bruner, *Corporate Governance Reform and the Sustainability Imperative*, 131 YALE L.J. 1062 (2022); Stavros Gadinis & Amelia Miazad, *Corporate Law and Social Risk*, 73 VAND. L. REV. 1401, 1458–63 (2020).

215. *Supra* note 196 and accompanying text.

216. On corporate fiduciary duties in the face of climate risk, see generally Cynthia A. Williams, *Fiduciary Duties and Corporate Climate Responsibility*, 74 VAND. L. REV. 1875 (2021); Gadinis & Miazad, *supra* note 214; Ernest Lim & Umakanth Varottil, *Climate Risk: Enforcement of Corporate and Securities Law in Common Law Asia*, 22 J. CORP. L. STUD. 391 (2022); OECD, *supra* note 36; *see also* Commonwealth Climate and Law Initiative, *supra* note 40 (compiling jurisdiction-specific reports on climate change and corporate and investor fiduciary duties).

217. KEAY, *supra* note 176; *see also* Client Earth v. Shell Plc [2023] EWHC 1897 (Ch) (Eng.) https://www.judiciary.uk/wp-content/uploads/2023/07/ClientEarth-v-Shell-judgment-240723.pdf [https://perma.cc/G8CS-W7FD] (emphasizing the business judgment of directors with regard to implementation of climate change risk management strategy and rejecting plaintiff's claims that Shell directors breached their duty of care and the duty under Section 172 to promote the company's success by failing to manage climate change risk).

218. For additional empirical support, see also *supra* note 173 and sources cited therein.

(and certainly not at all times), or corporate climate action would not be lagging under current market incentives.

Value Optimization & "Long-Term Value Creation". Corporate climate governance in its thicker forms is most compatible with long-term firm value *optimization*, that is to say, a balancing approach, rather than *maximization*. Value optimization can be bounded by particular climate or resource-based constraints. For example, firms might elect to invest in all net present value projects that also minimize GHG emissions, that satisfy certain resilience targets, or to "do no significant harm."[219] Decision rules based on balancing require decision-makers to weight profitability or other financial benchmarks alongside climate risk management and mitigation and other sustainability indicators selected by the company, perhaps with guidance from these disclosure regimes, all of which now need to be described to investors. An example of such a balancing test is the fiduciary test adopted in Delaware for benefit corporations.[220]

More complex decision rules of this sort are already in use for traditional firms as well, most prominently the "long-term value creation" (LTVC) rule advanced by Dirk Schoenmaker and colleagues.[221] They have developed an integrated value measure that combines financial, ecological, and societal value and that is designed to be used as a managerial decision rule *ex ante* as well as the basis for performance assessment *ex post*.[222] Extending standard valuation techniques, it requires weighting each component based on management prioritization of these components and can be applied to produce an LTVC that "optimizes financial, social, and environmental value subject to risk."[223] This approach is already widely used in incentive compensation plans.[224] Other examples of balanced decision tools include the range of ESG investment strategies that have already been

219. The "Do No Significant Harm" principle and minimum social safeguards have already been integrated into green finance standard definitions (i.e., taxonomies) so that climate mitigation or environmental protection goals are not reached by harming other constituencies and *vice versa*. *See, e.g.*, EUR. SEC. MARKETS AUTH., "DO NO SIGNIFICANT HARM" DEFINITIONS AND CRITERIA ACROSS THE EU SUSTAINABLE FINANCE FRAMEWORK, ESMA30-379-2281 (2023), https://www.esma.europa.eu/sites/default/files/2023-11/ESMA30-379-2281_Note_DNSH_definitions_and_criteria_across_the_EU_Sustainable_Finance_framework.pdf [https://perma.cc/2FBQ-7MAQ].

220. DEL. CODE ANN. tit. 8, § 365(a) (2020) (obligating the board of directors to balance "the pecuniary interests of the stockholders, the best interests of those materially affected by the corporation's conduct, and the specific public" benefit(s) identified in its corporate charter).

221. Reinier de Adelhart Toorop, Dirk Schoenmaker & Willem Schramade, *Decision Rules for Corporate Investment*, 12 INT'L J. FIN. STUD. 24 (2024) (developing an integrated measure for "long-term value creation" (LTVC) that includes stakeholder interests).

222. *Id.* Assigning higher weights to negative ecological and social values within a decision rule creates incentives for decisions that reduce those negative values. *Id.*

223. *Id.*; *see* SCHOENMAKER & SCHRAMADE, *supra* note 178, at 141–46, 163–67, 179–210 (discussing decision rules for capital expenditures and integrated value under a multi-factor net present value (NPV) approach).

224. *See generally* Shira Cohen et al., *Executive Compensation Tied to ESG Performance: International Evidence*, 61 J. ACCT. RES. 805 (2023); Marco Dell'Erba & Guido Ferrarini, *ESG & Executive Remuneration in Europe*, 25 EUR. BUS. ORG. L. REV. 439 (2024). These studies provide evidence that practices for ESG integration in executive compensation practices in the United States and beyond are improving beyond the level observed by Lucian Bebchuk & Roberto Tallarita, *The Perils and Questionable Promise of ESG-Based Compensation*, 48 J. CORP. L. 37 (2022).

developed by impact investors to achieve investment returns while attaining specified ESG goals.[225]

D. Reforming Risk Incentives: Implications for Fiduciary Duty & Corporate Strategy

Beyond its implications for managerial decision rules, one of the most significant normative shifts corporate climate governance requires has to do with risk itself. Of course, corporate climate governance is at base about strengthening how companies manage climate-related financial risks and impacts, and this risk management focus appears to align quite naturally with current legal and compliance obligations for most large companies operating in the United States. Indeed, all of the climate disclosure frameworks assume that companies have adopted risk management systems, and many global companies already integrate environmental risks into enterprise risk management.[226] Responding to climate-related financial risk and improving climate resilience is also clearly fundamental to the best interests of all corporations, at least in the long term.[227] But by elevating risk management and discouraging certain common forms of managerial risk-taking—namely, decisions that ignore climate risk effects, even "thin" corporate climate governance is fundamentally at odds with how corporate governance theory and fiduciary duty law in the Delaware courts have approached corporate risk.

Delaware law imposes no fiduciary duties on companies to *manage* "risk" (i.e., all risks) generally or to manage any particular risk specifically.[228] In the absence of these emerging reporting regimes, federal securities laws have not historically required companies to consider any particular risk required in order to comply with the general rules governing risk disclosure, with the recent exception of cybersecurity risk.[229] Indeed, limited liability, together with other fundamental features of the corporate form, *encourages* investors and corporate management to undertake risky investments and permits them to externalize harm to stakeholders where, as often happens, legal enforcement is weak or non-

225. The IRIS+ impact accounting system for impact investing is an illustration of the range of tools that can support these more complex decision rules. IRIS+, *IRIS+ System: Standards*, https://iris.thegiin.org/standards/ [https://perma.cc/B6R7-MHV4].

226. The Committee of Sponsoring Organizations of the Treadway Commission (COSO) and the World Business Council for Sustainable Development (WBCSD) have developed a framework for this purpose. COSO & WBCSD, ENTERPRISE RISK MANAGEMENT APPLYING ENTERPRISE RISK MANAGEMENT TO ENVIRONMENTAL, SOCIAL AND GOVERNANCE-RELATED RISKS (2018), https://www.wbcsd.org/resources/applying-enterprise-risk-management-to-environmental-social-and-governance-related-risks/ [https://perma.cc/3435-MKAW].

227. In the United Kingdom and other common law jurisdictions, risk oversight is generally understood to be within the scope of the fiduciary duty to act in good faith in the best interests of the corporation and to fall within the statutory or common law duty of care, skill, and diligence. *See generally* Lim & Varottil, *supra* note 216, at 393–402 (arguing that failing to anticipate and adapt to climate risk could expose corporate officers to claims for breach of the duty of care).

228. The policy rationales for this have much to do with the general problem of indeterminacy and shareholder-stakeholder conflicts addressed further in the companion article. *See* Harper Ho, *supra* note 31. *See generally* Christine Hurt, *The Duty to Manage Risk*, 39 J. CORP. L. 253 (2014) (arguing that a duty to manage risk would be unmanageable).

229. Cybersecurity Risk Management, Strategy, Governance, and Incident Disclosure, 88 Fed. Reg. 51,896 (Aug. 4, 2023) (requiring companies to manage, oversee, and disclose these risks).

existent.[230] Similarly, one of the standard rationales for shareholder governance rights and for the use of compensation incentives to align management with shareholders' interests is that doing so will encourage managerial risk-taking.[231] The logic behind these mechanisms and indeed the business judgment rule itself is that is that shareholders are presumed to prefer managerial risk-taking because it is likely to be value-enhancing, at least with respect to *business* risk.[232]

Moreover, in Delaware, the business judgment rule and the power to exculpate directors and now certain officers from breaches of the duty of care give corporate directors and officers broad discretion to make what may appear in hindsight to be foolish, misguided, or excessively risky decisions.[233] Indeed, compared to other common law jurisdictions, Delaware directors' discretion to make risky decisions is expansive.[234] The rationale for this deferential stance is the same as the justification for limited liability—risk-taking is expected to be value-enhancing, so long as the firm is not pushed to insolvency. Furthermore, judges are poorly positioned to judge business decisions in hindsight.[235] And as long as investors are informed of the nature of the risk, either at the time of their investment or when asked to approve a fundamental transaction, those willing to take on higher risk can expect a higher return.

At the same time, corporate boards in Delaware are also bound by a fiduciary duty to exercise risk oversight, which in Delaware sits doctrinally as part of the duty of loyalty though its roots are in the duty of care.[236] Both require corporate directors and officers to

230. These features include, of course, the core doctrines of separate legal personhood and limited liability, which allow companies to engage in risk-partitioning, risk-shifting, and risk-shielding. *See* John Armour et al., *What is Corporate Law*?, *in* ANATOMY, *supra* note 186, at 8–9.

231. FRANK EASTERBROOK & DANIEL FISCHEL, THE ECONOMIC STRUCTURE OF CORPORATE LAW 98–100 (1991).

232. RESTATEMENT. CORP. GOVERNANCE, *supra* note 188, at § 4.02 ("The purpose of the business judgment rule is to encourage rational risk-taking.").

233. Gagliardi v. Trifoods Int'l, Inc., 683 A.2d 1049, 1052–53 (Del. Ch. 1996). Officer exculpatory charter provisions that were authorized in 2022 in Delaware by amendments to Section 102(b)(7) of the Delaware corporate code have already been adopted by many Delaware corporations. Megan W. Shaner, *Understanding Officer Exculpation Under the MBCA Amendments*, BUS. L. TODAY (Nov. 2024), https://www.americanbar.org/groups/business_law/resources/business-law-today/2024-november/understanding-officer-exculpation-under-mbca-amendments/?login (on file with the *Journal of Corporation Law*). Such provisions are now permitted under the Model Business Corporation Act (MBCA) as well. *Id.* (discussing Section 2.02 of the MBCA, as amended).

234. In most common law jurisdictions, ordinary negligence can give rise to director liability for a breach of the duty of care and corporate officers may even be exposed to criminal penalties for certain statutory violations. *See* Lim & Varottil, *supra* note 216 (on the U.K. and Asian common law jurisdictions); Choudhury & Petrin, *supra* note 212 (on Canada). Beyond the availability of exculpatory provisions in the corporate charter, Delaware adopts the more generous gross negligence standard of liability for duty of care claims under *Smith v. Van Gorkom*, 488 A.3d 858, 873 (Del. 1985).

235. *See In re* Citigroup Inc. S'holder Derivative Litig., 964 A.2d 106, 124 (Del. Ch. 2009) (emphasizing that in the absence of bad faith, the business judgment rule protects fiduciaries from claims for "business decisions that, in hindsight, turned out poorly").

236. Stone v. Ritter, 911 A.2d 362, 365 (Del. 2006) (confronting the doctrinal tensions and holding that "bad faith" is a "necessary condition" for a finding of a breach of the duty of oversight). The Model Business Corporation Act establishes statutory duties with regard to both decision-making and oversight functions. MODEL BUS. CORP. ACT § 8.30 ("Standards of Conduct for Directors").

act in the best interests of the corporation.[237] Under *Caremark* and its progeny, corporate directors of Delaware firms must ensure that the company has an effective firm-wide internal compliance system and that they respond to any compliance "red flags" that emerge.[238] However, the Delaware courts have historically limited *Caremark* claims to directors' failure to exercise oversight or to respond to known legal risks.[239]

In recent years, a line of *Caremark* cases, beginning with *Marchand v. Barnhill*,[240] has extended the potential scope of oversight liability to include failure to oversee or respond to risks that go to the core of the business, that is, "mission critical" risks, and therefore that potentially encompass climate risk or other reputational, operational, or business risks.[241] The Delaware courts have also affirmed that oversight duties extend to certain corporate officers.[242]

Accordingly, a number of scholars have argued that *Caremark* claims offer a way to put real "teeth" behind the legal obligations created by the EU CSDDD and other foreign law that binds U.S. multinationals.[243] Despite these apparent expansions, however, *Caremark* oversight claims remain among the most difficult for plaintiffs to establish.[244] Even post-*Marchand*, few of these cases survive dismissal, and in 2025 the Delaware legislature moved to tighten shareholders' access to corporate information that had been credited by scholars as an important factor in improving plaintiffs' chances of success in *Marchand* and post-*Marchand* litigation.[245] The Delaware Chancery Court has also in non-*Caremark* cases rejected arguments that directors' oversight duty extends to corporate externalities (such as climate change) that may pose a financial risk to diversified investors or to the

237. This is an element of the business judgment rule presumption, which is applicable to claims for breach of the duty of care, but which may also be breached where there is a conflict of interest raising loyalty concerns.

238. Caremark Int'l Inc. Derivative Litig. 698 A.2d 959 (Del. Ch. 1996) (*adopted by* Stone, 911 A.2d at 365).

239. *See e.g.*, *In re* Citigroup Inc. S'holder Derivative Litig., 964 A.2d 106, 124 (Del. Ch. 2009) (rejecting claims based on an alleged failure to exercise oversight of business risk).

240. Marchand v Barnhill, 212 A.3d 805 (Del. 2019).

241. *Id.* at 822–24. *See generally* Roy Shapira, *Mission Critical ESG and the Scope of Director Oversight Duties*, 2022 COLUM. BUS. L. REV. 732 (discussing *Marchand* and later *Caremark* cases in contrast to earlier precedent limiting oversight liability to legal risk oversight claims); H. Justin Pace & Lawrence J. Trautman, *Climate Change and* Caremark *Doctrine: Imperfect Together*, 25 U. PA. J. BUS. L. 3 (2023).

242. *In re* McDonald's Corp. S'holder Derivative Litig., 289 A.3d 343 (Del. Ch. 2023) (including in the scope of officers' fiduciary duty of oversight the obligation to address risk red flags within their scope of responsibility and to convey material information to senior officers and to the board), *following* Gantler v. Stephens, 955 A.2d 695, 708–09 (Del. 2009).

243. *See generally* Luca Enriques, Matteo Gatti & Roy Shapira, *How the EU's Sustainability Due Diligence Directive Could Reshape Corporate America*, 78 STAN. L. REV. (forthcoming 2026) (manuscript at 26–27), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5083571; *see also* William J. Moon, *Transnational Corporate Law Litigation*, 74 DUKE L.J. 901 (2025) (making similar arguments regarding other foreign laws). As Enriques, Gatti & Shapira observe, compliance with foreign legal obligations under the securities laws or otherwise is already required under Delaware law under the vestigial *ultra vires* rule under which Delaware corporations must only "pursue 'lawful business' by 'lawful acts,'" which was emphasized in *In re* Massey Energy Co., 2011 WL 2176479, at *20 (Del. Ch. May 31, 2011). Enriques, Gatti & Shapira, *supra* note 243. *See also* McRitchie v. Zuckerberg, 315 A.3d 518, 572 (Del. Ch. 2024) (quoting this language from Chief Justice Strine in *In re* Massey Energy Co., 2011 WL 2176479, at *20).

244. Stone v. Ritter, 911 A.2d 362, 370 (Del. 2006). *See generally* Roy Shapira, *A New* Caremark *Era: Causes and Consequences*, 98 WASH. U. L. REV. 1847 (2021) (discussing liberalization of shareholder "books and records" inspections rights in Delaware); Roy Shapira, *Conceptualizing* Caremark, 100 IND. L.J. 467 (2024).

245. S.B. 21, 153rd Leg., Gen. Assembly (Del. 2025).

economy as a whole but that the company's directors do not view as a threat to the company itself.[246] While oversight duty is the key corporate mechanism to challenge climate risk-blindness, how robust a mechanism it still depends heavily on the strength of companies' legal obligations to adapt to and mitigate climate risk.

Beyond *Caremark* doctrine, the primary tension between emerging disclosure mandates and the underlying logic of the duties of care and loyalty under Delaware law is that corporate climate disclosure regimes are designed to encourage *risk management and mitigation*, not risk-taking, at least with respect to climate risk. And as discussed above, managing or reducing climate risk to the firm or to the planet, either of which falls under 'thick' climate governance (i.e., Case 3) may prevent companies from pursuing certain business opportunities that would increase climate risk. Viewed in this way, climate risk belongs in the same category as legal risks, which—in contrast to other business risks—companies should aim to *minimize* if they are indeed acting in the best interests of the corporation. More critically, all climate disclosure mandates implicitly raise the standard of conduct for risk oversight for directors and officers of Delaware corporations by establishing new expectations and norms of climate governance.[247]

It is worth noting at this juncture that Delaware's oversight jurisprudence and the current *Caremark* standard itself were shaped by a changing regulatory landscape, namely the widespread adoption of corporate compliance systems in response to the introduction of the federal corporate sentencing guidelines.[248] Following this same logic, rising state, international,[249] and in future, possibly federal, standards for climate risk monitoring and, as Enriques et al. have argued, the EU's due diligence rules, may already be raising the standard of *conduct* expected for corporate risk management in the same way.[250] As we have seen, corporate climate governance reduces the discretion that the business judgment rule otherwise gives managers to ignore climate risks and their financial effects, including those related to customers, key business partners, and other third parties directly in the company's value chain.[251] In addition, all of these climate disclosure regimes also expect companies to implement an internal reporting system for identifying and responding to material climate risks and to indicate how climate risk information reaches the board, perhaps

246. *McRitchie*, 315 A.3d at 518. The plaintiffs had argued based on common ownership theory that diversified investors' economic interests are harmed by corporate externalities that affect the broader economy or other portfolio firms. *See generally* Gosling, *supra* note 172; John Coffee Jr., *The Future of Disclosure: ESG, Common Ownership, and Systematic Risk*, 2021 COLUM. BUS. L. REV. 602; Madison Condon, *Externalities and the Common Owner*, 95 WASH. U. L. REV. 1 (2020). *But see* Marcel Kahan & Edward Rock, *Systemic Stewardship with Tradeoffs*, 48 J. CORP. L. 497 (2023) (expressing skepticism).

247. This observation has been made by other scholars as well.

248. *In re* Caremark Int'l Inc. Derivative Litig. 698 A.2d 959, 969–70 (Del. Ch. 1996).

249. Ensuring that identified sustainability and stakeholder risks are within the board's risk oversight function is included in the OECD's guidance for corporate governance best practices. OECD, *supra* note 33, at ch. V.D.

250. This observation has been made by many other scholars with respect to the U.S., as well as other common law jurisdictions. *See e.g.*, Blair & Stout, *supra* note 211 and sources cited therein (discussing corporate fiduciary duties under Delaware law); Enriques, Gatti & Shapira, *supra* note 243, at 26–27 (discussing corporate fiduciary duties under Delaware law); Ellis Ferran & Pedro Schilling de Carvalho, *Reconciling Shareholder Primacy and the Interests of People and Planet*, L.Q. REV. (forthcoming 2025) (manuscript at 29–36), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5084134 (on fiduciary duties under U.K. law).

251. This point has been noted by other scholars as well. Gen Goto, *ESG, Externalities, and the Limits of the Business Judgment Rule:* TEPCO *Derivative Suit on Fukushima Nuclear Accident and the Expansion of* Caremark, 12 CHINESE J. COMP. L. 1, 1 (2024).

making it easier for plaintiffs to establish bad faith in a failure to monitor known climate risk. As fires, floods, and other major climate-induced disasters put human health and safety and corporate assets at risk, corporate officers' ability to plead ignorance of climate "red flags" may also become more difficult even under existing liability standards.

If the SEC's final rules were to ultimately be implemented, state courts or legislatures may also be motivated to formally endorse these more stringent expectations regarding climate risk oversight and management by directly tightening fiduciary duty law, perhaps by developing an affirmative statutory standard of conduct for climate risk in states that adopt statutory fiduciary duties or by lowering the bar for risk oversight claims in Delaware, where fiduciary duties are defined by common law. Such reforms could help create a level playing field for corporate climate governance for all firms, listed or not, but making this case is beyond the scope of this Article. Even in the absence of a federal climate disclosure mandate, the implementation of climate disclosure regimes globally already signals an important normative shift and one that does not align with the rationales that lie behind Delaware's deferential fiduciary duty jurisprudence.

E. Climate-Informed Decision-Making: The Duty of Care

Another implication of corporate climate governance under both thin and thick reporting regimes concerns the scope and definition of informed decision-making. The SEC rules, while not imposing direct obligations, expect directors to monitor progress toward any climate targets and to implement a system to ensure that decisions on climate risk management and strategy are informed, a standard that we have already seen has bearing on the application of corporate risk oversight duties.[252]

As a matter of fiduciary duty in Delaware, and in other U.S. states for that matter, the obligation to ensure that corporate decision-making is fully informed is at the core of the duty of care.[253] Accordingly, the deference afforded by the business judgment rule in Delaware is only available for informed decisions made in good faith and in the best interests of the corporation, that is, those that are not otherwise tainted by a conflict of interest.[254] Furthermore, Delaware corporate directors and officers have a duty of candor to ensure that *shareholder* decision-making is fully informed.[255]

In view of these general obligations, if a company subject to any of the climate disclosure regimes were to identify certain climate-related risks as material, are corporate directors and officers free to disregard them in corporate decision-making? Practically speaking, the answer (as with nearly all potential violations of the duty of care) is almost certainly yes, so long as there is not a bad faith failure of oversight. Derivative litigation to challenge a breach of the duty of care remains the sole mechanism to challenge a grossly negligent decision-making process, which is extremely difficult in Delaware due to the widespread use of exculpatory charter provisions and the expansive scope of the business judgment

252. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,915, Item 1501(a) (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

253. Smith v. Van Gorkom, 488 A.2d 858, 873 (Del. 1985) (discussing the duty of care in the merger context). *See also* RESTATEMENT. CORP. GOVERNANCE, *supra* note 189, § 4.01–.02 (on the duty of care and the business judgment rule).

254. Aronson v. Lewis, 473 A.2d 805, 812 (Del. 1984).

255. Malone v. Brincat, 722 A.2d 5, 10–11 (Del. 1998). The duty of candor has been held to be "derivative" of the core duties of care and loyalty. Cinerama, Inc. v. Technicolor, Inc., 663 A.2d 1156, 1166 (Del. 1995).

rule. Moreover, as is perhaps obvious, there is no requirement in any of the disclosure regimes that corporate boards or management consider climate risk in *all* corporate decision-making contexts.[256]

The ISSB and ESRS, as "thicker" regimes, require companies to go further and to indicate how their governance bodies are informed of climate-related risks with respect to major transactions, capital allocation, policies and actions to respond to climate risk, and overseeing corporate strategy.[257] Accordingly, U.S. companies subject to the ESRS or in the supply chains of European companies will still be required to ensure that their boards of directors are informed about corporate stakeholder impacts and to take action to prevent, reduce, and remedy any identified negative impacts.[258] The U.S. federal rules, if adopted, would require boards of directors to engage in climate risk oversight in an informed manner and to do so specifically with respect to strategy-setting, disclosure controls, and risk management functions, as well as in connection with major transactions.[259] Although they do not alter corporate law or affect companies not subject to the reporting requirements, here too, the climate risk reporting regimes already raise the standard of conduct for decision-making by covered firms' boards of directors or other governing bodies under their existing obligation to exercise a duty of care in a climate-informed manner.

F. Board Structure, Composition, & Competencies

The final key dimension of corporate climate governance concerns board structure, composition, and director expertise. The empirical literature on board characteristics and corporate sustainability has shown that board capacity and board monitoring of sustainability contributes positively to environmental outcomes.[260] In general, the climate disclosure standards, with the exception of the ESRS, do not in fact require reporting on aspects of board composition, such as the diversity and experience of those responsible for climate risk management or oversight, though this may already be required under existing disclosure rules in a given jurisdiction, as is the case under the U.S. federal reporting rules.[261] Instead, all of the climate disclosure regimes give companies flexibility to determine the climate governance structure best suited to effective risk oversight and management.

At the same time, all of them require transparency about whether these responsibilities rest with the board of directors as a whole, with certain committees, or are delegated to a particular individual, and how those responsibilities are embedded in relevant internal

256. To this extent, these standards differ from mandatory constituency statutes or Art. 172 of the U.K. Companies Act (2006). *See supra* note 196 and accompanying text.

257. *IFRS S1*, *supra* note 9, at para. 82–83 (requiring disclosure regarding how the oversight body is informed about climate risk). *Cf.* ESRS 2025, *supra* note 8, at ESRS 2, para. 12(e) (former para. 26(b)), 21–33 & AR 17.

258. ESRS 2025, *supra* note 8, at ESRS 2, para. 39–41 (former para. 56, 62–64 & 72).

259. The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,712 (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249).

260. *See, e.g.*, Ruth V. Aguilera et al., *The Corporate Governance of Environmental Sustainability: A Review and Proposal for More Integrated Research*, 47 J. MGMT. 1468, 1470, 1475–79 (2021); Paul Ludwig & Remmer Sassen, *Which Internal Corporate Governance Mechanisms Drive Corporate Sustainability?*, 301 J. ENV'T MGMT. 113780 (2022); Patrick Velte, *Meta-Analyses on Corporate Social Responsibility (CSR): A Literature Review*, 72 MGMT. REV. Q. 627 (2022) (surveying 54 meta-analyses of studies examining these relationships).

261. *See* ESRS 2025, *supra* note 8, at ESRS 2, at para. 12(a) & AR 5 (former para. 21–23) (providing prescriptive indicators on composition and diversity, including board independence).

policies.[262] They all expect corporate boards and their committees to obtain the expertise necessary to properly exercise climate risk oversight, set corporate strategy, and plan for climate resilience once material climate risks have been identified.[263] Companies have flexibility in how they do so, but they must at least inform investors about the decisions they have made on these matters. While these disclosure standards encourage climate competencies, they are not prescriptive regarding any of the elements of board structure or composition that have been shown in the literature to contribute to improved sustainability practice or board function.[264]

As this discussion shows, by requiring transparency about decision-making with respect to climate risk monitoring, strategy, management, and capital allocation, even thin forms of corporate climate governance of the sort the U.S. federal rules would require engages climate-related stakeholder considerations. Whether they ultimately apply to U.S. firms voluntarily based on the TCFD recommendations, are backed by state-level climate regulation, or impact U.S. firms subject to international climate and sustainability disclosure regimes, all have the potential to raise the standards of conduct for directors and officers and shift how companies and their investors approach risk. They are also already shifting corporate governance norms and practices in the direction of stakeholders.

CONCLUSION

As we have seen, corporate climate governance is already being implemented in global capital markets under TCFD-based climate disclosure mandates and has also been embraced voluntarily by many of the largest U.S. firms.[265] And while corporate climate governance builds on familiar practices and structures, it is not business as usual. As the preceding discussion shows, emerging climate disclosure frameworks bring certain stakeholder factors—at minimum those related to climate risk—into corporate governance processes and mechanisms. They also make new internal climate governance processes to manage and monitor climate risk, such as resilience analysis and transition plans, expected.

This Article argues further that corporate climate governance offers a real-world model—indeed, a range of models—of stakeholder governance. The "thicker" standards, especially as they also reach material sustainability risks and impacts, would go further. Of course, corporate reporting is only an indirect mechanism for corporate governance reform; even in its thicker forms, we have seen that it can support but cannot compel firms to lower

262. *See* The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,915, Item 1501(b)(1) (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249); *see also IFRS S1*, *supra* note 9, at para. 26; ESRS 2025, *supra* note 8, at ESRS 2, at para. 12(c) (former para. 22 & 26).

263. For example, Item 1501 of the SEC's climate disclosure rules require disclosure regarding any expertise of the management or committees responsible for "assessing and managing" material climate-related risks, but do not require particular expertise standards. *See* The Enhancement and Standardization of Climate-Related Disclosures for Investors, 89 Fed. Reg. 21,668, 21,915, Item 1501(b)(1) (Mar. 28, 2024) (to be codified at 17 C.F.R. pts. 210, 229, 230, 232, 239, 249). The SEC eliminated its proposed expertise requirements in the final version of its rules. *Id.* at 21,675. The ISSB rules require companies to describe how they identify the climate-related competencies and skills needed for those with climate governance responsibility, whereas the ESRS requires discussion of how the relevant governance bodies determine whether this expertise is needed or will be developed. *IFRS S2*, *supra* note 9, at para. 6(ii); ESRS 2025, *supra* note 8, at ESRS 2, para. 23.

264. *See supra* note 262 and accompanying text (reviewing the literature).

265. *Supra* notes 25–27 and accompanying text.

GHG emissions or internalize the environmental costs of business operations. At the same time, corporate climate governance, even in its narrower forms, challenges how shareholder-centric corporate law systems approach core questions about corporate purpose, risk incentives, and the scope of fiduciary duties. It also challenges the received wisdom that corporate law should be (and can be) isolated from stakeholder concerns. This is so even though the future of climate disclosure rules in the United States remains uncertain and the U.S. state and federal rules, should they ultimately take effect, will leave state corporate law untrammeled.

Since corporate climate governance is already the "new normal" globally, companies will only face increasing expectations for effective corporate climate risk oversight, climate resilience, and transparency as the climate crisis deepens. In a companion article, I make the normative claim that these are positive developments, and that corporate climate governance in its various forms is already redefining "good" corporate governance across jurisdictions.[266] Regardless of how corporate law evolves in response, the reality is that emerging corporate disclosure regimes are already bringing about a transformation of corporate governance norms and practice that the field—and perhaps ultimately corporate law itself—will need to reckon with.

266. Harper Ho, *supra* note 31.