MODERNIZING ESG DISCLOSURE

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Nearly a decade ago, the U.S. Securities and Exchange Commission (SEC) began a comprehensive effort to "modernize and simplify" the disclosure rules that apply to U.S. public companies. In that period, investor demand for the SEC to standardize how companies disclose climate-related risk and other "environmental, social, and governance" (ESG) information has risen, and private standard setters, international organizations, and financial regulators outside the U.S. have already introduced ESG reporting frameworks.

The SEC, and indeed, the U.S. capital markets themselves, are now at a crossroads. The Biden administration has prioritized a coordinated response to climate change, and the SEC has committed to move forward rapidly to reform ESG disclosure. As a result, the SEC and Congress must now engage with difficult policy debates as they consider how to implement corporate ESG disclosure reform and whether to pursue a sustainable finance transition. These issues include questions about the rationale for ESG disclosure reform, its potential costs and benefits, and the precise form any new reporting rules should take.

This Article presents a roadmap for modernizing ESG disclosure that can be undertaken directly by the SEC, as well as more ambitious proposals that are a necessary foundation for sustainable finance reform and that could proceed with Congressional authorization. While there is growing consensus about the core goals of both of these paths, this Article is the first to address the key issues that must be resolved in order to transform how ESG information reaches the capital markets. Going beyond prior proposals, this Article advocates a tiered approach that will promote greater transparency and comparability of ESG information and also better align the regulatory framework for ESG reporting under the federal securities laws with emerging international standards.

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I. INTRODUCTION

The U.S. Securities and Exchange Commission (SEC) and indeed, the U.S. capital markets themselves, are now at a crossroads. Since 2012, the SEC has been engaged in incremental reforms to "modernize and simplify" the disclosure rules that apply to public companies.[1] During that period, investor demand for the SEC to standardize how companies disclose emerging "environmental, social, and governance" (ESG) risks,[2] including climate-related risk, has risen. Globally, financial and securities regulators, private standard setters, and international organizations from the United Nations[3] and the World Economic Forum (WEF)[4] to the International Organization of Securities Commissions (IOSCO)[5] and the G20's Financial Stability Board[6] have also been working to develop new ESG reporting frameworks. In 2021, the European Union toughened and

1. This comprehensive review was undertaken at the direction of Congress. *See generally* Jumpstart Our Business Startups Act, Pub. L. No. 112-106, Sec. 108, 126 Stat. 306, 313–14 (2012) [hereinafter JOBS Act]; Fixing America's Surface Transportation Act, Pub. L. No. 114-94, 129 Stat. 1312 (2015) [hereinafter FAST Act].

2. The term "ESG" does not have a common definition and is broader than the subset of ESG information that is material to investors on definitional issues. *See infra* Section III.B.1.

3. *See generally* UNITED NATIONS ENV'T PROGRAMME & THE WORLD BANK GRP., ROADMAP FOR A SUSTAINABLE FINANCIAL SYSTEM (2017), https://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Roadmap_for_a_Sustainable_Financial_System%2006112017.pdf [https://perma.cc/5WHT-A6XZ].

4. *See generally* WORLD ECON. F., MEASURING STAKEHOLDER CAPITALISM: TOWARDS COMMON METRICS AND CONSISTENT REPORTING OF SUSTAINABLE VALUE CREATION (2020) [hereinafter WEF Standards], http://www3.weforum.org/docs/WEF_IBC_Measuring_Stakeholder_Capitalism_Report_2020.pdf [https://perma.cc/83TT-YG2N] (introducing common reporting standards, including twenty-one core metrics and thirty-four expanded measures).

5. *See generally* INT'L ORG. OF SEC. COMM'NS (IOSCO), STATEMENT ON DISCLOSURE OF ESG MATTERS BY ISSUERS (2019), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD619.pdf [https://perma.cc/J387-A3LL] (acknowledging the potential impact of ESG factors on issuer operations and investment risk and return).

6. *See generally* TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES (TCFD), FINAL REPORT: RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (2017) [hereinafter TCFD 2017 Report], https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf [https://perma.cc/6XCU-6D8G].

expanded the corporate ESG reporting requirements it first introduced in 2014,[7] and the IFRS Foundation, which oversees the International Accounting Standards Board (IASB), has committed to develop a global standard for mandatory ESG reporting, focusing first on climate-related disclosure.[8]

The proliferation of new disclosure mandates and frameworks has been driven by evidence of the financial materiality of many ESG factors[9] and rising demand for better information on the financial effects of climate change.[10] It has also drawn support from social, responsible, and impact (SRI) investments that now represent one-third of all U.S.-domiciled assets under management (AUM) and consider to varying degrees on the external impacts of corporate activity.[11]

7. Proposal for a Directive of the European Parliament and of the Council amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No. 537/2014 as Regards Corporate Sustainability Reporting, COM (2021) 189 final (Apr. 21, 2021) [hereinafter Corporate Sustainability Reporting Directive (CSRD)], https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021PC0189&from=EN [https://perma.cc/4ZXC-KUGK]. This proposal is part of a broader sustainable finance package adopted by the European Union in April 2021, to direct capital toward sustainable activities and to establish the E.U. as a sustainable finance standard setter. *Sustainable Finance Package*, EUR. COMM'N (April 21, 2021), https://ec.europa.eu/info/publications/210421-sustainable-finance-communication_en [https://perma.cc/PLU8-6Z8B].

8. *See generally* INT'L FIN. REPORTING STANDARDS FOUND., IFRS FOUNDATION TRUSTEES' FEEDBACK STATEMENT ON THE CONSULTATION PAPER ON SUSTAINABILITY REPORTING (2021), https://www.ifrs.org/content/dam/ifrs/project/sustainability-reporting/sustainability-consultation-paper-feedback-statement.pdf [https://perma.cc/L9PR-8VCC]. As this Article is going to press, the IFRS Foundation has announced the establishment of the International Sustainability Standards Board (ISSB), the merger of other leading standard-setters into the ISSB, and the proposal of draft global climate and ESG reporting standards. *See IFRS Foundation Announces International Sustainability Standards Board, Consolidation with CDSB and VRF, and Publication of Prototype Disclosure Requirements*, INT'L FIN. REPORTING STANDARDS FOUND. (Nov. 3, 2021) [hereinafter IFRS Foundation], https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdsb-vrf-publication-of-prototypes/ [https://perma.cc/ZE69-WRYU].

9. *See* Ulrich Atz, Zongyuan (Zoe) Liu, Christopher C. Bruno & Tracy Van Holt, Does Sustainability Generate Better Financial Performance? Review, Meta-analysis, and Propositions 8–9, 20–22 (Aug. 31, 2021) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3708495 [https://perma.cc/6YLW-HG6G] (surveying twenty-four meta-studies and over 1,000 peer-reviewed studies since 2015). Atz et al. find that these studies demonstrate a "robust and positive association between sustainability and financial performance at the firm level" and positive risk-mitigating effects of ESG integration at the portfolio level. In this analysis, studies of the relationship between ESG factors and portfolio financial performance did not demonstrate meaningful differences for ESG-oriented portfolios and traditional investment, results which Atz et al. attribute to the lack of investor access to adequate ESG data and the fact that many studies on portfolio effects conflate different investment strategies. *Id.* at 4–5, 17–19 (discussing these limitations); *see also* Gunnar Freide, Timo Busch & Alexander Bassen, *ESG and Financial Performance: Aggregated Evidence from More than 2000 Empirical Studies*, 5 J. SUSTAINABLE FIN. & INV. 210, 210 (2015), https://www.tandfonline.com/doi/pdf/10.1080/20430795.2015.1118917?needAccess=true [https://perma.cc/R4JV-QPVL] (aggregating the results of nearly 2,200 individual studies and concluding that most found positive correlations between corporate financial performance and ESG investing). *See generally* Virginia Harper Ho, *Risk-Related Activism: The Business Case for Monitoring Nonfinancial Risk*, 41 J. CORP. L. 647 (2016) (explaining the economic rationales for shareholder activism around ESG risk). On ESG materiality, the drivers of disclosure reform demand, and market efficiency with respect to ESG factors, see generally *infra* Section II.A.

10. TCFD 2017 Report, *supra* note 6, at 8–11 (discussing the financial materiality of climate-related risk).

11. SRI investing now accounts for over $17 trillion in assets under management, representing one-third of all U.S.-domiciled assets under management. U.S. FORUM ON SUSTAINABLE & RESPONSIBLE INV. (US SIF), REPORT ON U.S. SUSTAINABLE AND IMPACT INVESTING TRENDS (2020), https://www.ussif.org/trends [https://perma.cc/ZC2G-P7BK].

Several reform proposals have already been raised in Congress[12] and to the SEC,[13] including recommendations from the SEC's own Investor Advisory Committee urging the SEC to create a standardized framework for ESG disclosure.[14]

But while the SEC first solicited public comment on the need for sustainability disclosure in 2016,[15] and in 2020 identified ESG disclosure as an emerging area of focus,[16] it previously rejected calls to standardize how information on climate-related risk and other ESG factors reaches investors. Instead, controversy over ESG materiality, the rationale for ESG disclosure reform, and the precise form ESG reporting should take has led to inertia and resistance from the business community and some SEC commissioners.[17]

In 2021, however, the SEC began to move rapidly to explore how ESG issues should be addressed across the agency and to develop proposals for climate risk and human capital disclosure.[18] The Biden administration also laid the

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12. ESG disclosure rules are part of the Corporate Governance Improvement and Investor Protection Act passed by the House of Representatives in 2021, H.R. 1187, 117th Cong. (2021) [hereinafter CGIIPA], as well as the proposed comprehensive CLEAN Future Act, H.R. 1512, 117th Cong. (2021). These bills build on others addressing climate risk or ESG disclosure that have been introduced since 2018. For example, the CGIIPA incorporates the disclosure mandates of the Climate Risk Disclosure Act of 2021, H.R. 2570, 117th Cong. (2021). *See* Climate Risk Disclosure Act of 2018, 115 S. 3481, 115th Cong. (2018); Climate Risk Disclosure Act of 2019, 116 H.R. 3623, 116th Cong. (2019); ESG Disclosure Simplification Act of 2019, 116 H.R. 4329, 116th Cong. (2019).

13. *See, e.g.*, Letter from Ceres, Nonprofit Org., to Jerome Powell, Chairman, Fed. Rsrv. Sys. (July 21, 2020), https://www.ceres.org/sites/default/files/Federal%20Regulators%20Letter.pdf [https://perma.cc/49HW-EP83] (calling for the SEC and other financial regulators to address climate-related systemic risk); Letter from Cynthia A. Williams, Professor, York Univ., & Jill E. Fisch, Professor, Univ. of Pennsylvania L. Sch., to Brent J. Fields, SEC, Petition for Rulemaking on Environmental, Social, and Governance (ESG) Disclosure, No. 4-730 (Oct. 1, 2018), https://www.sec.gov/rules/petitions/2018/petn4-730.pdf [https://perma.cc/35MY-X9WX]; Letter from Hum. Cap. Mgmt. Coal., to William Hinman, Dir., Div. of Corp. Fin., SEC, (July 6, 2017), https://www.sec.gov/rules/petitions/2017/petn4-711.pdf [https://perma.cc/E5FD-LM5Q] (discussing the materiality of human capital management and proposing specific indicators).

14. Inv.-as-Owner Subcomm. of the SEC Inv. Advisory Comm., Recommendation Relating to ESG Disclosure (May 14, 2020) [hereinafter IAC], https://www.sec.gov/spotlight/investor-advisory-committee-2012/recommendation-of-the-investor-as-owner-subcommittee-on-esg-disclosure.pdf [https://perma.cc/2N4X-VXQ5].

15. Business and Financial Disclosure Required by Regulation S-K: Concept Release, 81 Fed. Reg. 23916, 23919 (Apr. 22, 2016) [hereinafter Regulation S-K Concept Release].

16. Jay Clayton, [then] Chairman, *Statement on Proposed Amendments to Modernize and Enhance Financial Disclosures* (Jan. 30, 2020) [hereinafter Clayton 2020 Statement], https://www.sec.gov/news/public-statement/clayton-mda-2020-01-30 [https://perma.cc/W4TU-XQEX].

17. *See* discussion *infra* Section II.B. (exploring these objections).

18. On the meaning of "human capital," see *infra* note 43. *See generally* Public Statement by John Coates, Acting Dir., Div. of Corp. Fin., SEC, ESG Disclosure—Keeping Pace with Developments Affecting Investors, Public Companies and the Capital Markets (Mar. 11, 2021), https://www.sec.gov/news/public-statement/coates-esg-disclosure-keeping-pace-031121 [https://perma.cc/5ANC-6WYE] (urging the SEC to be "adaptive and innovative" and expressing support for the SEC to play a "leading role" in developing a "baseline global [ESG] framework"); *SEC Response to Climate and ESG Risks and Opportunities*, SEC, https://www.sec.gov/sec-response-climate-and-esg-risks-and-opportunities (May 28, 2021) [https://perma.cc/UVE3-3UJB] (summarizing the SEC's plans to review its 2010 climate-related disclosure guidance, the creation of a task force on climate and ESG issues, and the Division of Examinations' review of ESG products and services). In 2020, the SEC commissioned initial recommendations on ESG reform that are addressed further. *See infra* notes 138–40 and accompanying text; *see also* Asset Mgmt. Advisory Comm., Recommendations for ESG (July 7, 2021)

groundwork for these efforts through a national climate change policy that included climate finance initiatives, and it has indicated that it would support and guide international efforts to develop "consistent, comparable, and reliable climate-related financial disclosures" and to address climate-related financial risk.[19] Given these developments, the SEC and Congress must now engage with difficult policy questions as they consider how to modernize the rules governing ESG disclosure that are essential to meeting these goals.

This Article takes on the complex, yet critical threshold choices surrounding ESG modernization and presents a roadmap for disclosure reform that the SEC can undertake within its current statutory mandate. Its focus is on disclosure of ESG risks to the company and other material ESG factors, including human capital disclosure, climate-related financial risk, and related corporate governance reforms.[20]

However, if the goal of such reforms is to encourage companies to reduce their climate and environmental impacts or to achieve the level of transparency around ESG performance that will allow sustainability information to be integrated across the financial system as part of a post-carbon transition, then these measures will not go far enough. This Article therefore also advocates for more ambitious corporate disclosures to achieve these goals that could be pursued with congressional authorization.[21] Throughout, it focuses on the central weaknesses

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[hereinafter AMAC Recommendations], https://www.sec.gov/files/amac-recommendations-esg-subcommittee-070721.pdf [https://perma.cc/J44B-R4FJ]. The SEC also solicited public comment on potential climate change disclosure guidance and rulemaking. Public Statement, Allison Herren Lee, Acting Chair, SEC, Public Input Welcomed on Climate Change Disclosures (Mar. 15, 2021), https://www.sec.gov/news/public-statement/lee-climate-change-disclosures?utm_medium=email&utm_source=govdelivery [https://perma.cc/F4H2-GSRY].

19. Exec. Order No. 14,008, Tackling the Climate Crisis at Home and Abroad, 86 Fed. Reg. 7619 (Jan. 27, 2021) [hereinafter Climate Crisis Executive Order], https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/ [https://perma.cc/T3TU-EJ27]; Memorandum from the White House, U.S. International Climate Finance Plan, 12 (Apr. 22, 2021) [hereinafter Climate Finance Plan], https://www.whitehouse.gov/wp-content/uploads/2021/04/U.S.-International-Climate-Finance-Plan-4.22.21-Updated-Spacing.pdf [https://perma.cc/9TPX-HQMK]; Exec. Order No. 14,030, Climate-Related Financial Risk, 86 Fed. Reg. 27,967 (May 20, 2021) [hereinafter Climate-Related Financial Risk Order], https://www.govinfo.gov/content/pkg/FR-2021-05-25/pdf/2021-11168.pdf [https://perma.cc/Y9XA-PGBX] (requiring development of a "comprehensive, Government-wide strategy" on the "measurement, assessment, mitigation, and disclosure of climate-related financial risk to [the federal government]" and to assess the investment required to achieve net-zero greenhouse gas (GHG) emissions by 2050, limit global temperature rise to 1.5 degrees Celsius, and achieve climate adaptation goals). The U.S. Treasury Department has also formed a climate finance team that will coordinate with other agencies, including the SEC, on policies to facilitate a post-carbon transition. Sylvan Lane, *Treasury Creates Hub to Fight Climate Change Through Finance,* HILL (Apr. 19, 2021, 1:00 PM), https://thehill.com/policy/finance/549002-treasury-creates-hub-to-fight-climate-change-through-finance [https://perma.cc/UXY4-3BLE]. The Corporate Governance Improvement and Investor Protection Act, a legislative proposal that has been passed by the House of Representatives at the time of this writing, would in fact require the SEC to pursue climate-related disclosure reform. CGIIPA, *supra* note 12.

20. At the time of this writing in June 2021, the SEC is considering proposing disclosure rules on climate risk, human capital, and cybersecurity risk, among others. Press Release, SEC, SEC Announces Regulatory Agenda (June 11, 2021) [hereinafter SEC Regulatory Agenda], https://www.sec.gov/news/press-release/2021-99 [https://perma.cc/JM9D-36AJ].

21. On these proposals, see generally *infra* Part IV.

that plague ESG disclosure at present—its lack of consistency, comparability, and reliability.[22]

Going beyond prior policy proposals, this Article recommends a tiered approach that will promote greater transparency and comparability of ESG information within and across industry sectors. It also proposes how to better align the current regulatory framework for ESG reporting under Regulation S-K of the Securities Exchange Act of 1934 (the "Exchange Act")[23] with emerging global reporting standards.[24]

This Article also directly confronts the central questions of the scope and purpose of ESG disclosure reform, issues which will determine whether the SEC can endorse emerging global ESG reporting standards and which established reporting standards and frameworks, if any, will inform its work. The core goal of ESG disclosure reform that most clearly lies within the SEC's statutory authority is to ensure that material ESG information reaches investors.[25] Governments also recognize the urgent need for information about the financial impact of climate change on companies.[26] While these market-oriented goals are the primary focus of this Article, regulators in capital markets outside the United States, are also looking to improve the quality and comparability of ESG information as an important regulatory tool;[27] from this perspective, improving corporate transparency around the costs companies externalize to the environment, other stakeholders, and the broader economy can motivate better corporate behavior and align financial regulation with sustainable development goals. Information about companies' environmental impact and climate mitigation efforts is also essential in order to reduce climate impacts and improve climate adaptation. All of these goals require information that will enable markets to accurately price ESG risk and to direct capital to more sustainable uses.[28] That said, whether the SEC should pursue even the more modest of these goals and whether it has the authority and ability to do so have been highly contested.[29]

22. For evidence of this consensus, see *infra* notes 73–76 and accompanying text.

23. 17 C.F.R. § 229 (2021).

24. This includes, most notably, the global framework being developed by the IFRS Foundation's International Sustainability Standards Board. *See* IFRS Foundation, *supra* note 8 and accompanying text.

25. *See infra* Section II.A (discussing ESG materiality under the federal securities laws); Commission Guidance Regarding Disclosure Related to Climate Change, Release Nos. 33-9106, 34-61469, 75 Fed. Reg. 6290 (Feb. 8, 2010) [hereinafter 2010 Climate Guidance], https://www.sec.gov/rules/interp/2010/33-9106.pdf [https://perma.cc/S7Y5-TLS9].

26. *See supra* notes 3–8 and accompanying text.

27. *See Take Action for the Sustainable Development Goals*, UNITED NATIONS, https://www.un.org/sustainabledevelopment/sustainable-development-goals/ (last visited Nov. 20, 2021) [https://perma.cc/9BBP-XD87]. These include China, Brazil, and South Africa, as well as the United Kingdom and continental Europe. *See generally* Virginia Harper Ho & Stephen Park, *ESG Disclosure in Comparative Perspective: Optimizing Private Ordering in Public Reporting*, 41 U. PA. J. INT'L L. 249 (2019) (discussing these developments).

28. *See* EUR. UNION HIGH-LEVEL WORKING GRP. ON SUSTAINABLE FIN., FINANCING A SUSTAINABLE EUROPEAN ECONOMY 20–22 (July 2017), https://ec.europa.eu/info/sites/info/files/170713-sustainable-finance-report_en.pdf [https://perma.cc/7VCD-LJCW]; *see also Commission Action Plan: Financing Sustainable Growth*, COM (2018) 97 final (Aug. 3, 2018) [hereinafter EU Action Plan] (identifying disclosure as a key component of sustainable finance reform).

29. For further discussion of these debates, see *infra* Section III.B.

Extensive literature and my own prior work have already examined many of the fundamental issues that are relevant to risk disclosure reform generally and ESG disclosure in particular.[30] These include the advantages and disadvantages of mandatory disclosure regimes,[31] the state of ESG disclosure by U.S. companies,[32] and the economic justifications behind mainstream investor demand for ESG information.[33] The SEC has also previously explored some of these questions in its own comprehensive review of the federal disclosure regime.[34] While these concepts are not the focus of this Article, they are an important foundation for the policy proposals and analysis that follow.[35]

However, prior academic work in this area has often failed to distinguish the diverse goals of ESG reform and has not addressed how each can be achieved under the federal securities laws.[36] Instead, reform proposals from academic commentators to date have typically advised continued reliance on voluntary disclosure beyond and within public filings, an approach this Article rejects.[37] In addition, consensus is rising in the United States and internationally in support of leading frameworks like the climate disclosure framework developed by the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD)[38] and the Sustainability Accounting Standards Board (SASB)'s industry-specific standards, both of which are the basis of the ISSB's draft global

30. *See generally* Virginia Harper Ho, *Nonfinancial Disclosure & the Costs of Private Ordering*, 55 AM. BUS. L.J. 407 (2018) [hereinafter *Private Ordering*] (arguing that the SEC's reliance on private ordering to elicit material ESG information imposes high costs on investors, reporting companies, and the SEC itself); Harper Ho, *Risk-Related Activism, supra* note 9; *see also* Harper Ho & Park, *supra* note 27, at 288–312 (surveying comparative examples of how disclosure regulation leverages private standards).

31. This Article draws on a deep literature exploring the public benefits and efficiencies of mandatory disclosure. *See, e.g.*, Michael D. Guttentag, *Protection from What? Investor Protection and the JOBS Act*, 13 U.C. DAVIS BUS. L.J. 207, 224–27 (2013) (highlighting the fairness interests in a level playing field among investors); *see also* John C. Coffee, Jr., *Market Failure and the Economic Case for a Mandatory Disclosure System*, 70 VA. L. REV. 717, 733–34 (1984) (observing the "social waste" of transaction costs that result from the under- and over-production of securities research in the absence of mandatory disclosure); Frank H. Easterbrook & Daniel R. Fischel, *Mandatory Disclosure and the Protection of Investors*, 70 VA. L. REV. 669, 680–85 (1984). Improved corporate governance and resulting social welfare gains are also widely recognized benefits of disclosure. *See* Louis Lowenstein, *Financial Transparency and Corporate Governance: You Manage What You Measure*, 96 COLUM. L. REV. 1335, 1342–45 (1996).

32. *See infra* Section II.A. (reviewing these sources).

33. On ESG and climate risk materiality, see *supra* note 10 and accompanying text.

34. *See generally* SEC, REPORT ON REVIEW OF DISCLOSURE REQUIREMENTS IN REGULATION S-K (2013) [hereinafter Regulation S-K Study], https://www.sec.gov/news/studies/2013/reg-sk-disclosure-requirements-review.pdf [https://perma.cc/D52Y-E8RC].

35. *See generally infra* Part II.

36. *See infra* Section III.A. (discussing prior disclosure proposals more fully).

37. *See, e.g.*, Andrew Winden, *Jumpstarting Sustainability Disclosure*, 76 BUS. LAWYER (forthcoming Fall 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3765647 [https://perma.cc/3YPJ-6ADQ]; *see also* Jill E. Fisch, *Making Sustainability Disclosure Sustainable*, 107 GEO. L.J. 923, 959 (2019) (proposing that a separate narrative sustainability discussion and analysis be included in corporate financial reporting).

38. *See generally* TCFD 2017 Report, *supra* note 6.

reporting framework.[39] No studies thus far have considered how the U.S. framework must be adapted in order to implement or align with these standards.

This is a critical gap because ESG disclosure reform largely concerns risk disclosure and so requires considering how the existing risk disclosure framework under the federal securities laws should intersect with emerging international standards.[40] These questions will only become more pressing as international organizations, standard setters, and regulators move to harmonize international ESG reporting frameworks.

This Article takes on these critical implementation challenges. Part II explores the current state of ESG disclosure practice in the U.S. and identifies the key challenges surrounding ESG disclosure reform. Part III then addresses core questions concerning the scope of ESG disclosure reform and the parameters of a standardized framework. It advocates a tiered approach to modernizing ESG disclosure that would standardize ESG reporting by endorsing and building on the third-party standards developed by the SASB and the TCFD. These proposals could offer a starting point to harmonization with the IFRS-sponsored global reporting standard that is under development at the time of this writing. Part III also presents specific reform proposals to introduce material climate risk, corporate governance, and human capital disclosure. Part IV concludes by considering what federal legislation could do to advance the reforms proposed in Part III. It also introduces some of the more ambitious disclosure reforms that will be necessary to mitigate climate risk and corporate environmental harms, and to support a sustainable finance transition.[41]

39. Most prominent, perhaps, are the endorsements of both the SASB and the TCFD by BlackRock's CEO, Larry Fink. *See, e.g.*, Larry Fink, *Letter to CEOs—A Fundamental Reshaping of Finance*, BLACKROCK, https://www.blackrock.com/us/individual/larry-fink-ceo-letter (last visited Nov. 20, 2021) [https://perma.cc/AHU5-QEPZ] (indicating BlackRock's intent to monitor corporate board progress on sustainability disclosure against these standards). In 2021, the SASB merged with the International Integrated Reporting Council (IIRC) to form the Value Reporting Foundation. *IIRC and SASB Form the Value Reporting Foundation, Providing Comprehensive Suite of Tools to Assess, Manage, and Communicate Value* (June 9, 2021), VALUE REPORTING FOUND. (Nov. 25, 2020), https://www.integratedreporting.org/news/iirc-and-sasb-form-the-value-reporting-foundation-providing-comprehensive-suite-of-tools-to-assess-manage-and-communicate-value/ [https://perma.cc/K6MV-8YVV]. Both later merged into the newly formed ISSB. IFRS Foundation, *supra* note 8.

40. *See generally infra* Section III.C (proposing how to harmonize Regulation S-K with leading international frameworks and the proposed global ESG reporting standards).

41. Because the focus of this Article is on corporate ESG reporting, it does not address how these recommendations may be extended to investment intermediaries under the Investment Company Act of 1940, 15 U.S.C. §§ 80a-1–80a-64 (2018), nor does it address accounting standards or the rules under Regulation S-X, 17 C.F.R. 210.1-01 (2021), that govern the financial statements. Accountants, auditors, and accounting oversight bodies are, however, considering how to incorporate ESG factors into financial reporting and related accounting standards. *See, e.g.*, sources cited *supra* note 8 (discussing the work of the IFRS Foundation); ASS'N OF INT'L CERTIFIED PRO. ACCTS. & CTR. FOR AUDIT QUALITY, ESG REPORTING AND ATTESTATION: A ROADMAP FOR AUDIT PRACTITIONERS (2021), https://www.aicpa.org/content/dam/aicpa/interestareas/businessindustryandgovernment/resources/sustainability/downloadabledocuments/caq-esg-reporting-and-attestation-roadmap-2021-Feb-v2.pdf [https://perma.cc/8FRV-E23M].

II. Framing the Debate Over ESG Disclosure Form

In 2020, the SEC adopted final rules amending certain provisions of Regulation S-K, which governs public company reporting beyond the financial statements.[42] Enacted in the midst of a global pandemic when attention to workforce-related concerns (*i.e.*, the "social" in ESG) soared, these rules require companies to report material information on "human capital."[43] They also updated the disclosure rules related to the costs of certain environmental litigation.[44] These are the first substantive amendments addressing ESG factors to emerge from the SEC's decades-long "Disclosure Effectiveness Initiative."[45]

However, the heated debates over even these flexible and rather modest reforms are evidence of both the high demand among investors for greater standardization of ESG disclosure and the continued resistance among companies and business advocates to such reforms, all of which will impact the progress of any new proposed reforms.[46] This Section explains why ESG disclosure reform is necessary and, in the case of climate-related disclosure reform, imperative. It also discusses the overlapping, yet diverse goals that justify such reforms and that will inform their scope. Finally, this Section responds to the key objections the SEC's current reform must address in the U.S. context.

A. The Call to Modernize ESG Disclosure

Demand for ESG disclosure reform has risen rapidly over the past decade, driven by growing consensus among mainstream investors that all companies should disclose material ESG information in their public filings, even though the specific information that is material may vary by firm and industry sector.[47] ESG information is increasingly recognized as financially material and is of particular concern to highly diversified investors at the portfolio level.[48] When the SEC last

42. *See generally* Modernization of Regulation S-K Items 101, 103, and 105, Rel. No. 33-10825, 85 Fed. Reg. 63726-01 (Oct. 8, 2020) [hereinafter 2020 Final Rules].

43. Human capital refers to workforce-related contributions to an organization and can include human rights considerations that affect the workforce. *See* VALUE REPORTING FOUND., INTERNATIONAL <IR> FRAMEWORK 19 (2021) https://integratedreporting.org/wp-content/uploads/2021/01/InternationalIntegratedReportingFramework.pdf [https://perma.cc/2LSR-KSBX] (defining human capital to include "[p]eople's competencies, capabilities and experience, and their motivations to innovate" including their alignment with organizational governance, strategic direction, values, and risk management).

44. 2020 Final Rules, *supra* note 42, at 63730–31. The rules also make non-substantive changes to Item 105 risk factor disclosures. *Id.*; *see also* sources cited *infra* note 329.

45. *See generally Spotlight on Disclosure Effectiveness*, SEC, https://www.sec.gov/spotlight/disclosure-effectiveness.shtml (last visited Nov. 20, 2021) [https://perma.cc/2UHG-RKU3].

46. *See* 2020 Final Rules, *supra* note 42, at 63738–39 (discussing the views expressed in public comments on the draft rules regarding human capital); *see also infra* Section II.B (discussing key objections to mandatory ESG disclosures).

47. On the sector-specific nature of ESG materiality, see *infra* note 191 and accompanying text. Although its statement was not endorsed by the SEC, IOSCO affirmed this view in 2019, stating that "ESG matters, though sometimes characterized as non-financial, may have a material short-term and long-term impact on the business operations of the issuers as well as on risks and returns for investors and their investment and voting decisions." IOSCO, *supra* note 5, at 1.

48. *See* sources cited *supra* note 9 and accompanying text.

sought input from market participants on the need for ESG disclosure reform in 2016 and 2017, over 80% of respondents, including the SEC's Investor Advisory Committee (IAC), urged the SEC to implement reforms.[49] The IAC's 2020 report again called for the SEC to develop a framework for ESG disclosure.[50] In addition to investor rulemaking petitions to the SEC on ESG disclosure reform,[51] shareholder proposals on ESG matters continue to rise, with more proposals attracting majority support or being resolved without a vote.[52] This is due in part to support for ESG in the voting guidelines of the major proxy advisory firms,[53] and commitments on ESG shareholder voting and engagement by the largest institutional investors in U.S. capital markets, BlackRock, State Street, Vanguard, and Fidelity, all of which have signaled their support for shareholder proposals seeking information on climate-related risk, greenhouse gas (GHG) emissions, and certain other ESG matters.[54] As discussed below, demand for ESG information is also rising in response to growing concerns about the effect of climate-

49. Virginia Harper Ho, *Disclosure Overload? Lessons for Risk Disclosure & ESG Reporting Reform from the Regulation S-K Concept Release*, 65 VILL. L. REV. 67, 73 (2020) [hereinafter *Disclosure Overload?*] (analyzing all public comments to the Regulation S-K Concept Release related to risk disclosure). The level of support for ESG reform from investors has continued to grow since the period covered by the Regulation S-K Concept Release data. *See* KIRAN VASANTHAM & DAVID SHAMMAI, INSTITUTIONAL INVESTOR SURVEY 8 (2020), https://morrowsodali.com/insights/institutional-investor-survey-2020 [https://perma.cc/7D7E-5MP4] (reporting that survey respondents unanimously agreed that ESG risks and opportunities are increasingly key to investment decision-making); KIRAN VASANTHAM, PATRICK WIGHTMAN, JANA JEVCAKOVA & MANDY OFFEL, INSTITUTIONAL INVESTOR SURVEY 8 (2021), https://morrowsodali.com/insights/institutional-investor-survey-2021 [https://perma.cc/MG5K-N8AN] (reporting that nearly all investors surveyed are giving ESG risks more focus in engagement and investment decision-making and 85% do so with respect to voting decisions); Phillipp Krueger, Zacharias Sautner & Laura T. Starks, *The Importance of Climate Risks for Institutional Investors*, 33 REV. FIN. STUD. 1067, 1079–83 (2020) (finding that institutional investors view climate risk as financially material).

50. IAC, *supra* note 14, at 7.

51. *See supra* note 13 and accompanying text.

52. *See* Institutional S'holder Servs. (ISS), *2021 United States Environmental & Social Issues Proxy Season Review* (Oct. 26, 2021), https://insights.issgovernance.com/posts/2021-united-states-environmental-social-issues-proxy-season-review/ [https://perma.cc/ARJ4-DQNX] (reporting that such proposals received a record level of majority support).

53. INSTITUTIONAL S'HOLDER SERVS. (ISS), UNITED STATES PROXY VOTING GUIDELINES BENCHMARK POLICY RECOMMENDATIONS 64 (2021), https://www.issgovernance.com/file/policy/active/americas/US-Voting-Guidelines.pdf [https://perma.cc/SUX8-NV4V]. *See generally* GLASS LEWIS, 2021 GUIDELINES: ENVIRONMENTAL, SOCIAL & GOVERNANCE (ESG) INITIATIVES (2021), https://www.glasslewis.com/wp-content/uploads/2020/11/ESG-Initiatives-Voting-Guidelines-GL.pdf [https://perma.cc/HRT3-F395].

54. *See, e.g.*, BLACKROCK, BLACKROCK INVESTMENT STEWARDSHIP: PROXY VOTING GUIDELINES FOR U.S. SECURITIES 3 (2021), https://www.blackrock.com/corporate/literature/fact-sheet/blk-responsible-investment-guidelines-us.pdf [https://perma.cc/4KWK-GTXS]; Letter from Cyrus Taraporevala, President and CEO, State St. Glob. Advisors, to Board Members (Jan. 11, 2021), https://www.ssga.com/us/en/institutional/ic/insights/ceo-letter-2021-proxy-voting-agenda [https://perma.cc/5ZH5-Q2Y5] (endorsing the TCFD framework and requiring portfolio companies to use the SASB framework); FIDELITY INVS., PROXY VOTING GUIDELINES 7 (2021), https://www.fidelity.com/bin-public/060_www_fidelity_com/documents/Full-Proxy-Voting-Guidelines-for-Fidelity-Funds-Advised-by-FMRCo-and-SelectCo.pdf [https://perma.cc/ZC2R-JGUA]; VANGUARD, SUMMARY OF THE PROXY VOTING POLICY FOR U.S. PORTFOLIO COMPANIES 10 (2020), https://about.vanguard.com/investment-stewardship/portfolio-company-resources/2020_proxy_voting_summary.pdf [https://perma.cc/7VZL-36LZ].

related financial risk on the economy as a whole. At the time of this writing, the SEC has announced that it is working to respond to these calls.[55]

At the same time, there is evidence that investors are confronting twin challenges that mandatory disclosure was designed to address—an overload of ESG information in corporate sustainability reports that is not clearly material to investors, and the simultaneous under-reporting of material investment-grade ESG information in companies' public filings.[56] These challenges are driving calls for the SEC and Congress to create a standardized framework for disclosing ESG information, and in particular, information on the material financial impacts of ESG risks.

1. The Limits of Voluntary Sustainability Reporting & Other Forms of Private Ordering

Institutional investors and securities regulators worldwide are not advocating new ESG disclosure rules because of a lack of publicly available ESG information in the capital markets. On the contrary, the core problem is that the present system relies almost entirely on voluntary sustainability reporting, which is characterized by what Banks and Georgiev have called low "informational integrity,"[57] and is therefore not easily integrated into investment analysis. Moreover, because the information in sustainability reports is intended for a broader range of corporate stakeholders, information that may be material from an investment standpoint is obscured and costly for investors to identify.[58] Ironically, this kind of "disclosure overload"[59] now arises largely because of the nature of voluntary reporting, not because of the extent of mandatory ESG reporting requirements.[60]

At present, in fact, information on corporate ESG risks is reported primarily in corporate sustainability reports.[61] Although voluntary reporting is less

55. SEC Regulatory Agenda, *supra* note 20.

56. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 119–22, 126–28 (observing these challenges). Further evidence for this conclusion is presented in the remainder of this section.

57. *See* Steven A. Bank & George S. Georgiev, *Securities Disclosure as Soundbite: The Case of CEO Pay Ratios*, 60 B.C. L. REV. 1123, 1180–89 (2019) (defining "informational integrity" to encompass the accuracy, comprehensibility, and completeness of disclosure).

58. Regulation S-K Concept Release, *supra* note 15, at 23919.

59. The problem of "disclosure overload" was first recognized as a challenge by the Supreme Court in *TSC Industries* and *Basic v. Levinson,* cases that defined materiality for purposes of the securities laws. Basic v. Levinson, 485 U.S. 224, 231–32 (1988) (citing TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 448–49 (1976)). As the SEC noted in its Concept Release on Regulation S-K, the concern is that "high levels of immaterial disclosure can obscure important information" if investors are relying on these sources to inform their investment decisions. Regulation S-K Concept Release, *supra* note 15, at 23919.

60. This is confirmed by data from investor responses to the 2016 Regulation S-K Concept Release. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 126–31.

61. *See, e.g.*, U.S. GOV'T ACCOUNTABILITY OFF., GAO-20-530, PUBLIC COMPANIES: DISCLOSURE OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE FACTORS AND OPTIONS TO ENHANCE THEM 25 (2020) [hereinafter 2020 GAO REPORT], https://www.gao.gov/assets/gao-20-530.pdf [https://perma.cc/L88V-7WF2] (finding that most diversity and climate-related disclosures are in corporate sustainability reports rather than the annual report); Michael P. Vandenbergh, *Disclosure of Private Environmental Governance Risks*, 63 WM. & MARY L. REV.

prevalent among smaller public companies,[62] 90% of public companies in the S&P 500 produce such reports, which must often be accessed from individual corporate websites.[63] Voluntary sustainability reporting, however, may be based on any number of reporting standards and frameworks, or in a manner determined entirely by the company itself.[64] Moreover, most public companies do not connect the personnel and processes associated with sustainability reporting to those responsible for risk management or financial reporting, which further reduces comparability and reliability.[65] Relatively few companies obtain external assurance of sustainability disclosures.[66] Most critically, because sustainability reporting is generally directed at a wide range of stakeholders identified by the company, it is subject to self-defined materiality standards that are not aligned with the financial definition of materiality that applies to public reporting.[67] As a result, the informational content of voluntary reports, even if based on the same framework, may vary widely across sectors and among companies in the same

(forthcoming 2022) (finding that extractive sector firm climate risk is disclosed in sustainability reports instead of in the firms' public filings). Another study of public companies in the oil and gas sector in 2016 similarly found that most companies provided climate-related risk disclosures aligned with the TCFD guidelines in their sustainability reports rather than in their public filings. Robert G. Eccles & Michael P. Krzus, An Analysis of Oil & Gas Company Disclosures from the Perspective of the Task Force on Climate-Related Financial Disclosures 1 (Dec. 14, 2017), https://ssrn.com/abstract=3091232 [https://perma.cc/P7RJ-XWXA].

62. *Flash Report: 65% of the Russell 1000 Index Published Sustainability Reports in 2019*, GOVERNANCE & ACCOUNTABILITY INST. (Oct. 26, 2020), https://www.ga-institute.com/research-reports/flash-reports/2020-russell-1000-flash-report.html [https://perma.cc/PK3R-BS2X] (reporting that 39% of the 500 smaller companies in the index produced sustainability reports, compared to 90% in the largest 500).

63. *Flash Report: 90% of S&P Index Companies Publish Corporate Sustainability/Responsibility Reports in 2019*, GOVERNANCE & ACCOUNTABILITY INST. (July 16, 2020), https://www.ga-institute.com/research/ga-research-collection/flash-reports/2020-sp-500-flash-report.html [https://perma.cc/83PX-FAEH].

64. This problem is widely observed. *See* BD. OF THE INT'L ORG. OF SEC. COMM'NS (IOSCO), SUSTAINABLE FINANCE AND THE ROLE OF SECURITIES REGULATORS AND IOSCO 23–24 (2020) [hereinafter IOSCO, SUSTAINABLE FINANCE], https://www.iosco.org/library/pubdocs/pdf/IOSCOPD652.pdf [https://perma.cc/C7T8-3RKD] (identifying the multiplicity of frameworks and standards as a key challenge for ESG disclosure). *See generally* Hans B. Christensen, Luzi Hail & Christian Leuz, *Adoption of CSR and Sustainability Reporting Standards: Economic Analysis and Review* (Eur. Corp. Governance Inst.-Fin., Working Paper No. 623/2019, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3427748 [https://perma.cc/3HSD-AJ5N] (identifying this concern in their study of sustainability reporting standards and practice).

65. COMM. OF SPONSORING ORGS. OF THE TREADWAY COMM'N (COSO) & WORLD BUS. COUNCIL FOR SUSTAINABLE DEV. (WBSCD), ENTERPRISE RISK MANAGEMENT: APPLYING ENTERPRISE RISK MANAGEMENT TO ENVIRONMENTAL SOCIAL AND GOVERNANCE-RELATED RISKS 5, 18 (2018) [hereinafter COSO & WBSCD], https://www.coso.org/Documents/COSO-WBCSD-ESGERM-Guidance-Full.pdf [https://perma.cc/U5HB-8LEK]; TCFD 2017 Report, *supra* note 6, at 39.

66. CERES, DISCLOSE WHAT MATTERS 2, 20–24 (2018), https://www.ceres.org/sites/default/files/reports/2018-08/Ceres_DiscloseWhatMatters_Final.pdf [https://perma.cc/PFU8-BG5W] (reporting that nearly 60% of "large global companies do not externally assure their sustainability disclosures, and the quality of the assurance provided is low"). The same study found that over 70% of North American companies surveyed had not adopted assurance practices. *Id.* at 22; *see also* INV. RESP. RSCH. CTR. INST., STATE OF SUSTAINABILITY AND INTEGRATED REPORTING 29–30 (2018) [hereinafter IRRC], https://www.weinberg.udel.edu/IIRCiResearchDocuments/2018/11/2018-SP-500-Integrated-Reporting-FINAL-November-2018-1.pdf [https://perma.cc/A57S-SANX] (reporting that over 60% of sustainability reports by S&P 500 companies lacked external assurance).

67. Public company sustainability reporting is largely based on the international framework developed by the Global Reporting Initiative (GRI), which promotes disclosure about corporate impacts on stakeholders and permits the company to define materiality. *See generally Standards*, GLOB. REPORTING INITIATIVE [hereinafter GRI Standards], https://www.globalreporting.org/standards (last visited Nov. 20, 2021) [https://perma.cc/DY38-6M7P].

industry. All of these factors make ESG information contained in such reports costly to identify, obtain, and incorporate in investment analysis.[68] Table 1 identifies how materiality is defined under the leading voluntary frameworks; here, "financial materiality" refers to the definition of materiality that applies under the federal securities laws.

TABLE 1: INTERNATIONAL ESG REPORTING FRAMEWORKS

	Source of Materiality Definition	*Materiality Basis*	*Covered Companies*	*ESG Scope*	*Intended Use*
Global Reporting Initiative (GRI)	self-defined	stakeholder materiality	any	all & industry-specific; based on materiality self-assessment	voluntary; sustainability report
EU 2014 Non-Financial Reporting Directive	Directive & national legislation	stakeholder materiality	certain large companies	human rights, diversity, GHG emissions	annual report or separate sustainability report
Sustainability Accounting Standards Board (SASB)	U.S. securities laws	financial materiality	any	all & industry-specific	voluntary; public filings
Task Force on Climate-Related Financial Disclosure (TCFD)	national securities & financial regulation	materiality defined by relevant jurisdiction	any	climate-related financial risk	voluntary; public filings
Climate Disclosure Standards Board (CDSB)[69]	U.S. securities laws	financial materiality	any	climate-related financial risk	voluntary; public filings
Integrated Reporting (IIRC)	national law (financial) & self-defined (stakeholder)	both	any	all; based on materiality self-assessment	voluntary; public filings

In the absence of a clear mandatory framework, investors do have self-help mechanisms at their disposal to elicit more information or push for better ESG reporting practices. These include direct shareholder engagement with corporate

68. IRRC, *supra* note 66, at 26–33 (discussing these limitations); IOSCO, SUSTAINABLE FINANCE, *supra* note 64, at 22–25 (discussing the same); Christensen et al., *supra* note 64, at 20–21 (discussing the same).

69. *See generally* CLIMATE DISCLOSURE STANDARDS BD. (CDSB), CDSB FRAMEWORK FOR REPORTING ENVIRONMENTAL AND CLIMATE CHANGE INFORMATION: ADVANCING AND ALIGNING DISCLOSURE OF ENVIRONMENTAL INFORMATION IN MAINSTREAM REPORTS (2019) [hereinafter CDSB FRAMEWORK], https://www.cdsb.net/sites/default/files/cdsb_framework_2019_v2.2.pdf [https://perma.cc/G7ZH-DA6R].

management, deploying specialized surveys, or relying on information obtained from private ESG data providers.[70] As I have observed in prior work, all of these methods are costly to investors, and also to companies, who must expend resources to respond to repeated information requests and to engage with or resist investors' case-by-case disclosure demands.[71] Interestingly, business advocates who have urged the SEC to defer to these forms of private ordering are also among those who have strongly urged the SEC to limit access to these mechanisms, often citing in support the cost companies must bear to respond to repeated engagement.[72]

For these reasons, the growing consensus among investors, the SEC, and other regulators is that ESG information produced outside the public filings is not reliable, accessible, comparable, or otherwise suited to investment analysis.[73] These conclusions were reinforced in a 2020 study by the Government Accountability Office (GAO) on the state of ESG disclosure by U.S. companies and in the Commodity Futures Trading Commission (CFTC)'s pathbreaking report on climate risk in the U.S. financial system.[74] Even the U.S. Chamber of Commerce, a staunch opponent of mandatory disclosure, has acknowledged the need for greater standardization, noting that a "lack of a universally accepted set of standards remains a major challenge [for businesses when it comes] to effective ESG reporting."[75] In short, the differing audiences, materiality standards, and goals

70. *See* Harper Ho, *Private Ordering, supra* note 30, at 431–35.

71. On the costs of private ordering, see *id.*, at 443–56.

72. In 2020, the SEC amended Rule 14a-8 to raise ownership thresholds for investor proponents and the voting thresholds for proposals to be resubmitted. Procedural Requirements and Resubmission Thresholds under Exchange Act Rule 14a-8, 85 Fed. Reg. 70240, 70240 (Nov. 4, 2020). Supporters of these limits include those who have argued that investors can use shareholder proposals to seek ESG information, making disclosure reform unnecessary. *See, e.g.*, Letter from Tom Quaadman, Exec. Vice Pres., Ctr. for Cap. Mkts, on Procedural Requirements and Resubmission Thresholds Under Exchange Act Rule 14a-8, to Vanessa A. Countryman, Sec'y, SEC (Jan. 31, 2020), https://www.sec.gov/comments/s7-23-19/s72319-6730870-207447.pdf [https://perma.cc/3J8G-AXU7]; Letter from Chris Netram, VP, Tax & Dom. Econ. Pol'y, Nat'l Assn. Mfrs. (NAM), on Procedural Requirements and Resubmission Thresholds Under Exchange Act Rule 14a-8, to Vanessa A. Countryman, Sec'y, SEC (Feb. 3, 2020), https://www.sec.gov/comments/s7-23-19/s72319-6735509-207647.pdf [https://perma.cc/2E87-R4PT].

73. Lee, *supra* note 18 (identifying the reasons for the SEC's public comment solicitation); *see also* IAC, *supra* note 14, at 4–7 (centering on these challenges); Williams & Fisch, *supra* note 13, at 1–2; TCFD 2017 Report, *supra* note 6, at 1–3; INST. OF INT'L FIN. (IIF), BUILDING A GLOBAL ESG DISCLOSURE FRAMEWORK: A PATH FORWARD 2, 4–6 (2020), https://www.iif.com/Portals/0/Files/content/Regulatory/IIF%20Building%20a%20Global%20ESG%20Disclosure%20Framework-a%20Path%20Forward%20(June%202020)%20final.pdf [https://perma.cc/M386-G4RN] (calling for a global, "harmonized, cross-sectoral framework.").

74. 2020 GAO REPORT, *supra* note 61, at 16, 42 (discussing the challenges of inconsistent and incomparable ESG data); COMMODITY FUTURES TRADING COMM'N (CFTC), MANAGING CLIMATE RISK IN THE U.S. FINANCIAL SYSTEM 88–92 (2020), https://www.cftc.gov/ [https://perma.cc/U6L6-57WL] (identifying these limits with respect to climate-related disclosure). An earlier GAO study identified inconsistency of ESG data as a key factor limiting its use. *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-18-398, RETIREMENT PLAN INVESTING: CLEARER INFORMATION ON CONSIDERATION OF ENVIRONMENTAL, SOCIAL, AND GOVERNANCE FACTORS WOULD BE HELPFUL 16 (2018), https://www.gao.gov/assets/gao-18-398.pdf [https://perma.cc/XM7W-HFUB].

75. U.S. CHAMBER OF COM. FOUND. & THE CHAMBER'S CTR. FOR CAP. MKTS. COMPETITIVENESS (CCMC), CORPORATE SUSTAINABILITY REPORTING: PAST, PRESENT, FUTURE 28–32 (2018), https://www.uschamberfoundation.org/sites/default/files/Corporate%20Sustainability%20Reporting%20Past%20Present%20Future.pdf [https://perma.cc/8AYM-DCU6] (citing company "survey fatigue" and the costs of shareholder engagement).

for voluntary reporting prevent their alignment with the federal reporting framework and obscure financially material ESG information in a way that is costly to investors.[76]

2. ESG Under-Reporting & Hidden Risk

In contrast to voluntary sustainability reporting, corporate reporting under the federal disclosure rules generates data that is reliable, readily accessible to all investors equally, and reported consistently in a way that facilitates comparability across firms and over time. Moreover, as the SEC has previously explained, many elements of the current federal disclosure framework should already elicit ESG disclosure in some form.[77] Primarily, these rules are contained in Regulation S-K, which governs the content of corporate annual and quarterly reports, as well as the content of corporate proxy statements.[78] By some estimates, the overall level of disclosure for certain ESG factors in corporate annual reports and other public filings appears to be rising.[79]

Institutional investors, however, have argued that a standardized framework for material ESG information is necessary because ESG information is currently underreported in public filings, and because reported ESG information is not readily comparable but is frequently boilerplate and generic.[80] In the extreme, information asymmetries around ESG risk could cause markets to misprice risk or overvalue assets.[81] Although testing this claim is itself difficult in view of the lack of historical reporting of ESG information, evidence from countries that

76. Stakeholder-oriented frameworks that are already widely used, such as the GRI Standards, could be incorporated as a source of mandatory nonfinancial reporting standards or indicators if Congress were to direct the SEC to mandate disclosure in advance of particular public policy goals. *See infra* note 427 and accompanying text.

77. *See generally* 2010 Climate Guidance, *supra* note 25; *cf.* Commission Statement and Guidance on Public Company Cybersecurity Disclosures, 83 Fed. Reg. 8166 (Feb. 26, 2018) [hereinafter 2018 Cybersecurity Guidance]; *infra* Section III.C. (discussing these provisions in detail).

78. 17 C.F.R. § 229 (2021).

79. IRRC, *supra* note 66, at 32 (reporting that 40% of the S&P 500 include ESG concepts in their public filings); Era Anagnosti et al., *E&S Disclosure Trends in SEC Filings 2018-2019*, WHITE & CASE (June 26, 2019), https://www.whitecase.com/publications/alert/es-disclosure-trends-sec-filings-2018-2019 [https://perma.cc/3DCS-98VD] (reporting that over 90% of the top 50 Fortune 100 firms increased the environmental and social disclosures in Form 10-Ks and proxy statements from 2018-2019).

80. *See, e.g.*, Williams & Fisch, *supra* note 13, at 9–12; Letter from Jeffrey P. Mahoney, Gen. Couns., Council of Inst. Invs., to Carolyn B. Mahoney, Chair, Subcomm. on Inv. Prot., Entrepreneurship, & Cap. Mkts., Comm. on Fin. Servs., H.R. and Bill Huizenga, Ranking Member, Subcomm. on Inv. Prot., Entrepreneurship, & Cap. Mkts., Comm. on Fin. Servs., H.R. (July 9, 2019) [hereinafter CII Testimony], https://www.cii.org/files/issues_and_advocacy/correspondence/2019/July%209%202019%20(finalI)%20Subcommittee%20hearing%20letter.pdf [https://perma.cc/3Q4T-2B7G] (arguing that ESG disclosures in public filings are inadequate with respect to ESG risk); SUSTAINABILITY ACCT. STANDARDS BD., THE STATE OF DISCLOSURE 2017: AN ANALYSIS OF THE EFFECTIVENESS OF SUSTAINABILITY DISCLOSURE IN SEC FILINGS 2, 14–17 (2017), https://www.sasb.org/knowledge-hub/state-of-disclosure-2017/ [https://perma.cc/G5TM-ND9B] (finding that most disclosure in SEC filings on topics identified as material by SASB was boilerplate and that performance metrics were rarely disclosed); *see also* VASANTHAM ET AL., *supra* note 49, at 14–15 (reporting that over 60% of surveyed investors want better disclosure of the financial impact of climate risk).

81. *See* CFTC, *supra* note 74, at 59–60, 79 (emphasizing the lack of climate risk data and raising concerns about mispricing); *see also* discussion *infra* notes 124–127 and accompanying text.

have already adopted ESG disclosure mandates indicates that ESG information asymmetries exist.[82] The SEC itself has acknowledged these problems and recognized the need for disclosure reform that will "provide more consistent, comparable, and reliable information for investors."[83]

Underreporting is due, in part, to the fact that companies are not obligated to disclose *all* material information, but only what is required to be reported under a specific disclosure rule or as necessary to make the required disclosures not misleading.[84] As the Supreme Court stated in *Basic v. Levinson* with regard to Rule 10b-5 of the Exchange Act, "[s]ilence, absent a duty to disclose, is not misleading."[85] Another critical factor is that corporate disclosure is largely subject to companies' own judgment about what is material to investors, which is precisely what makes it difficult to demonstrate the extent to which underreporting occurs. However, the fact that many public companies, as well as trade and industry associations like the U.S. Chamber of Commerce and the Business Roundtable have categorically rejected the materiality of ESG information in the past[86] would be expected to cause them to conclude it need not be disclosed, regardless of its materiality to investors.[87] This may also explain why ESG matters are still a low priority for corporate boards[88] and why ESG risk management remains weak.[89] Firm-level materiality assessments may also not align with the

82. *See generally* Phillipp Krueger, Zacharias Sutner, Dragon Yongjun Tang & Rui Zhong, *The Effects of Mandatory ESG Disclosure Around the World* (Eur. Corp. Governance Inst. – Fin., Working Paper No. 754/2021, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3832745 [https://perma.cc/8SRW-BV4L] (using data from twenty-five countries showing higher accuracy of analysts' earnings forecasts once mandatory reporting was introduced).

83. Lee, *supra* note 18.

84. 17 C.F.R. § 230.408 (2001); 17 C.F.R. § 240.12b-20 (2013).

85. *Basic, Inc. v. Levinson*, 485 U.S. 224, 239 n.17 (1988); *see also* In re Time Warner Sec. Litig., 9 F.3d 259, 266–67 (2d Cir. 1993) ("[A] corporation is not required to disclose a fact merely because a reasonable investor would very much like to know that fact. Rather, an omission is actionable under the securities laws only when the corporation is subject to a duty to disclose the omitted fact.").

86. *See, e.g.*, CTR. FOR CAP. MKTS. COMPETITIVENESS (CCMC), U.S. CHAMBER OF COM., ESSENTIAL INFORMATION: MODERNIZING OUR CORPORATE DISCLOSURE SYSTEM 13–14 (2017), https://www.centerforcapitalmarkets.com/wp-content/uploads/2013/08/U.S.-Chamber-Essential-Information_Materiality-Report-W_FINAL-1.pdf [https://perma.cc/8EZB-9YJS]; *see also* Letter from John Hayes, Chair, Corp. Gov. Comm., Bus. Roundtable, to Brent J. Fields, Sec'y, SEC (July 21, 2016), https://www.sec.gov/comments/s7-06-16/s70616-208.pdf [https://perma.cc/6L5Y-RRKG].

87. Corporate and investor responses to the 2016 Regulation S-K Concept Release, *supra* note 15, differed significantly with respect to key questions such as the potential for at least some ESG information to be material to investors, the value of prescriptive disclosure, the authority of the SEC to undertake ESG disclosure reform, the adequacy of voluntary reporting, corporate risk factor disclosures, and climate-related risk disclosure, the relevance of ESG factors to MD&A, and whether under-reporting of risk is a problem under the current framework. *See generally* Harper Ho, *Disclosure Overload?*, *supra* note 49 (analyzing public comment data on these issues).

88. NAT'L ASS'N OF CORP. DIRS. (NACD), 2018–2019 NACD PUBLIC COMPANY GOVERNANCE SURVEY (2018), https://www.nacdonline.org/analytics/survey.cfm?ItemNumber=63801 [https://perma.cc/VG34-JAGM] (surveying over 500 public company directors); NAT'L ASS'N OF CORP. DIRS. (NACD), 2019-2020 NACD PUBLIC COMPANY GOVERNANCE SURVEY (2019), https://www.nacdonline.org/analytics/survey.cfm?ItemNumber=66753 [https://perma.cc/535C-Q959] (reporting similar results).

89. COSO & WBSCD, *supra* note 65. Evidence that such judgments represent independent bias rather than a data-driven assessment comes from global surveys conducted by the Certified Financial Analyst (CFA)

needs of institutional investors, for whom ESG information may become material in the aggregate due to the amplification of systematic (*i.e.*, market) risk related to ESG factors across a broad or even market-wide portfolio.[90] Large institutional investors are particularly exposed to such risks,[91] which empirical evidence indicates could be reduced by more specific mandatory ESG disclosure.[92]

Prior research has established that without prescriptive disclosure mandates, however, companies face strong incentives to underreport, particularly with respect to poor corporate practices and risk.[93] Cognitive limits and behavioral biases may prevent corporate boards and managers from accurately assessing risk and developing appropriate responses to complexity.[94] Corporate managers are also particularly reticent to disclose negative information unless they are clearly required to do so, given the potential effect on the company's stock price.[95] As George Georgiev has observed, the sheer size of multinational enterprises also leads to "materiality blindspots," making even high-risk operations appear minor relative to the enterprise as a whole.[96]

Institute, which found evidence of gender and generational differences in evaluations of ESG materiality among financial analysts. CFA INST., ENVIRONMENTAL, SOCIAL AND GOVERNANCE (ESG) SURVEY 46–54 (2017), https://www.cfainstitute.org/-/media/documents/survey/esg-survey-report-2017.ashx [https://perma.cc/8NEF-22VE].

90. *See generally* John C. Coffee, *The Future of Disclosure: ESG, Common Ownership and Systematic Risk*, (Eur. Corp. Governance Inst.–L., Working Paper No. 541/2020, 2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3678197 [https://perma.cc/HA85-SFA9] (emphasizing the market risk effects of ESG factors at the portfolio level).

91. *See* Madison Condon, *Externalities and the Common Owner*, 95 WASH. U.L. REV. 1, 4 (2020) (arguing that highly diversified investors have incentives to internalize portfolio-wide negative externalities like climate risk); *see also* Coffee, *supra* note 90, at 9–10, 14–17 (arguing that ESG disclosures generally reflect systematic risks that matter to institutional investors because of their market-wide risk exposure). This phenomenon and its implications for investor activism were first explained by JAMES P. HAWLEY & ANDREW T. WILLIAMS, THE RISE OF FIDUCIARY CAPITALISM HOW INSTITUTIONAL INVESTORS CAN MAKE CORPORATE AMERICA MORE DEMOCRATIC (2000) (introducing the concept of "universal ownership").

92. Krueger et al, *supra* note 82, at 4–5 (finding that mandatory ESG disclosure reduces stock price crash risk related to negative ESG events).

93. *See, e.g.*, Edward A. Morse, Vasant Raval & John R. Wingender, Jr., *SEC Cybersecurity Guidelines: Insights into the Utility of Risk Factor Disclosures for Investors*, 73 BUS. LAW. 1 (2017) (finding that cybersecurity risk factor disclosure did not improve in response to the SEC's 2011 guidance); *see also* CERES, COOL RESPONSE: THE SEC & CORPORATE CLIMATE CHANGE REPORTING: SEC CLIMATE GUIDANCE & S&P 500 REPORTING—2010 TO 2013, at 12–13 (2014), https://www.ceres.org/sites/default/files/reports/2017-03/Ceres_SECguidance-append_020414_web.pdf [https://perma.cc/6L4F-FM23] (finding the same tepid response to the SEC's 2010 climate guidance). *See generally* Donald C. Langevoort, *Disasters and Disclosures: Securities Fraud Liability in the Shadow of Corporate Catastrophe*, 107 GEO. L.J. 967, 970 (2019) (discussing these biases). For a more complete review of the limits of risk-related disclosure, see Harper Ho, *Private Ordering*, *supra* note 30, at 440–43 (citing authorities).

94. *See* Madison Condon, *Market Myopia's Climate Bubble*, UTAH L. REV. 32–37 (forthcoming 2022) (discussing how cognitive biases and corporate misinformation about climate risk work contributing to risk mispricing). *See generally* Donald C. Langevoort, *Organized Illusions: A Behavioral Theory of Why Corporations Mislead Stock Market Investors (and Cause Other Social Harms)*, 146 U. PA. L. REV. 101 (1997) (exploring how hubris and other biases lead to oversight failures).

95. *See* Zohar Goshen & Gideon Parchomovsky, *The Essential Role of Securities Regulation*, 55 DUKE L.J. 711, 759–62 (2006) (discussing disincentives against transparency in the secondary markets).

96. *See generally* George S. Georgiev, *Too Big to Disclose: Firm Size and Materiality Blindspots in Securities Regulation*, 64 UCLA L. REV. 602 (2017).

ESG disclosure may be perceived as disadvantageous for other reasons, too. Firms may hesitate to voluntarily disclose information that may benefit their competitors unless all firms are clearly obligated to do so, and the more expansive and specific disclosures companies make, the greater their potential exposure to litigation for false or misleading statements.[97] The lack of attention historically to ESG materiality and disregard for the financial risks associated with climate change and other ESG factors may amplify these biases, potentially with aggregated effects across the entire market.[98]

In an effort to overcome the information asymmetries surrounding material ESG issues, many investors have begun to rely on proprietary ratings and private ESG data providers. As the SEC's Investor Advisory Committee has noted, however, such data is not always reliable or consistent,[99] in part because of the limitations of publicly reported ESG information that feed into these databases and analytics. Also, ESG data providers need to protect their competitive position; thus their methodology is neither transparent nor consistent.[100] Finally, access to such information is costly, creating an unequal playing field among investors.[101] Accordingly, ESG ratings, whether from stock exchanges or other ratings services, are not an adequate substitute for ESG disclosure reform.

Indeed, the lack of consistent standards for labeling and marketing "sustainable" or "ESG" investment products based on these ratings is itself a separate challenge to the efficient pricing of their risk.[102] It also increases concerns about "greenwashing" and false advertising in the marketing of such products, a problem which the SEC has begun to investigate and which the EU and other governments are already working to address.[103]

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97. *See* Harper Ho, *Disclosure Overload?*, *supra* note 49, at 110, n.215 (citing comments on the Regulation S-K Concept Release to this effect by Davis Polk & Wardwell and Wachtell, Lipton, Rosen & Katz).

98. As Madison Condon notes in her research on the sources of companies' "climate myopia," these biases are widespread and non-random, and so they cannot be "cancelled out" in the market by rational investor arbitrage as the efficient capital market hypothesis predicts and can therefore distort market pricing. Condon, *supra* note 94, at 37, 38 n.203 (citations omitted).

99. IAC, *supra* note 14, at 1.

100. *See also* IAC, *supra* note 14, at 5–6 (raising concerns about this issue); Timothy M. Doyle, *Ratings that Don't Rate: The Subjective World of ESG Ratings Agencies*, AM. COUNCIL FOR CAP. FORMATION (2018), https://accf.org/2018/07/19/ratings-that-dont-rate-the-subjective-world-of-esg-ratings-agencies/ [https://perma.cc/7JVL-L47M] (comparing the limitations of the ratings industry to those of proxy advisory firms). *See generally* Florian Berg, Julian F. Koelbel & Roberto Rigobon, *Aggregate Confusion: The Divergence of ESG Ratings*, MIT SLOAN SCH. MGMT. (May 17, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3438533 [https://perma.cc/NYF2-6248].

101. IAC, *supra* note 14, at 8.

102. *Id.* at 3.

103. The EU's green finance taxonomy is directed at avoiding "greenwashing" by establishing criteria for activities and financial instruments that claim to be environmentally sustainable or to contribute to a social objective. *See* Regulation (EU) 2020/852 on the Establishment of a Framework to Facilitate Sustainable Investment, 2020 O.J. (L 198) 11 [hereinafter EU Taxonomy].

3. Reducing Systemic Risk: The Climate Risk Challenge

The systemic risk to financial markets from climate change and information gaps around climate risk provides further justification for mandating ESG disclosure, as well as for a climate-first approach to these reforms. In its 2010 guidance, the SEC urged companies to assess the financial materiality of climate-related risk,[104] but it is now increasingly clear that climate risk and related disclosure blind spots also pose systemic threats to the financial system.[105] Systemic risk is financial risk both *within* and *to* the financial system itself that investors cannot shield themselves from through diversification.[106] In general, systemic risk is the risk of sudden shocks or stresses to the financial system[107] that can result in high volatility, sudden losses in asset value, and potentially "cascading effects" across financial institutions and the entire economy.[108]

In 2017, the Task Force on Climate-Related Financial Disclosure (TCFD) of the G20's Financial Stability Board prepared a key report on the financial effects of climate-related risk.[109] The report observed that companies worldwide, and particularly in the financial sector, do not adequately disclose information on climate-related financial risk and often lack consistent measures with which to report and assess such data.[110] The TCFD concluded that climate risk information gaps are therefore a potential source of systemic risk, echoing earlier findings by IOSCO on the connection between information asymmetries and systemic risk.[111] As the TCFD explained, the current lack of investment-grade information about the financial impacts of climate change may create pricing distortions that expose global markets to destabilizing and unpredictable volatility when these hidden risks materialize, resulting in financial shock and sudden asset

104. *See generally* 2010 Climate Guidance, *supra* note 25.

105. *See generally* ORG. FOR ECON. CO-OPERATION & DEV. (OECD), INVESTMENT GOVERNANCE AND THE INTEGRATION OF ENVIRONMENTAL, SOCIAL AND GOVERNANCE FACTORS 32–35 (2017), http://www.oecd.org/finance/Investment-Governance-Integration-ESG-Factors.pdf [https://perma.cc/5UMA-9B9R] (discussing each of these risk categories); CFTC, *supra* note 74, at 91. The SEC's 2010 guidance focused on the physical, legal, and regulatory risks associated with a post-carbon transition. 2010 Climate Guidance, *supra* note 25, at 6.

106. Steven L. Schwarcz, *Systemic Risk*, 97 GEO. L.J. 193, 207 (2008).

107. *Id.* at 204. Systemic risk generally manifests as "(i) shock amplification, which refers to conditions in the financial system that allow a given shock to propagate widely, magnifying its disruptive effect; (ii) disruption or impairment of all or part of the financial system, meaning that portions of the system cease to effectively support economic activity; and (iii) severe externalities, meaning spillovers affect the real (non-financial) economy." CFTC, *supra* note 74, at 26 (citations omitted).

108. CFTC, *supra* note 74, at ii. Steven Schwarcz defines systemic risk as:

> [T]he risk that (i) an economic shock such as market or institutional failure triggers (through a panic or otherwise) either (X) the failure of a chain of markets or institutions or (Y) a chain of significant losses to financial institutions, (ii) resulting in increases in the cost of capital or decreases in its availability, often evidenced by substantial financial-market price volatility.

Schwarcz, *supra* note 106, at 204.

109. TCFD 2017 Report, *supra* note 6.

110. *Id.* at 1–2.

111. *Id.* at 5–6 (discussing the potentially disruptive effects to the financial system of transitioning to a low-carbon economy). IOSCO, MITIGATING SYSTEMIC RISK: A ROLE FOR SECURITIES REGULATORS 19–20 (2011), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD347.pdf [https://perma.cc/BLB3-S682].

loss.[112] Its 2020 status report on the state of climate risk disclosure reinforced these findings,[113] with early support in the empirical literature.[114]

Systemic risk effects are exacerbated when "market participants lack sufficient incentive, absent regulation, to limit risk-taking in order to reduce the systemic danger to others."[115] For example, if reporting companies conclude that their exposure to climate-related financial risk is not material to investors, and reporting frameworks do not require them to assess this risk, then aggregated or networked effects across whole segments of the market may go unobserved.[116] These effects are likely to be greater in U.S. capital markets, which exhibit highly concentrated share ownership by the "Big Three" (BlackRock, Vanguard, State Street) or "Big Four" (adding Fidelity).[117] Information asymmetries and blind spots around climate-related financial risk are therefore a market failure that could be corrected in part through disclosure regulation.

These concerns have been amplified by the 2020 report of the Commodity Futures Trading Commission (CFTC), which details the systemic risks to the financial system from climate change.[118] It stresses the urgent need for SEC action to help standardize climate-related risk disclosure so that financial products can be developed to manage climate risk, and so that regulators and investors can begin to take account of its financial impacts.[119] As the CFTC has observed:

> [S]ystemic shocks are more likely when the prices of a wide variety of financial assets do not fully reflect climate-related physical and transition risks [because] when [these] risks are not fully priced in, market participants will accumulate larger exposures to risky assets than would otherwise be desirable. A sudden revision of market participants' perceptions about climate risk could trigger a disorderly repricing of assets, which could have

112. TCFD 2017 Report, *supra* note 6, at 1.

113. TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES, 2020 STATUS REPORT 2 (2020) [hereinafter TCFD 2020 Status Report], https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf [https://perma.cc/883C-K4JG].

114. *See, e.g.*, Ronald Balvers, Ding Du & Xiaobing Zhao, *Temperature Shocks and the Cost of Equity Capital: Implications for Climate Change Perceptions*, 77 J. BANKING & FIN. 18, 18 (2017) (finding that temperature shocks increase the cost of equity capital).

115. Schwarcz, *supra* note 106, at 193; *see also* Iman Anabtawi & Steven L. Schwarcz, *Regulating Systemic Risk: Towards an Analytical Framework*, 86 NOTRE DAME L. REV. 1349, 1375–76 (2011) (explaining how firm-centric decision-making can produce externalities that resemble a tragedy of the commons).

116. *See generally* Schwarcz, *supra* note 106 (describing the collective action problems that give rise to systemic risk).

117. *See* Coffee, *supra* note 90, at 3 (noting that Vanguard, BlackRock, State Street, and Vanguard hold more than 20% of the shares of S&P 500 companies and control 25% of the voting power). *See generally* Matthew Backus, Christopher Conlon & Michael Sinkinson, *Common Ownership in America: 1980-2017* (Nat'l Bureau of Econ. Rsch., Working Paper No. 25454, 2019), https://www.nber.org/papers/w25454.pdf [https://perma.cc/3HZK-ABRB] (analyzing these trends).

118. *See generally* CFTC, *supra* note 74.

119. *Id.* at 94; *see also* SUSTAINABILITY ACCT. STANDARDS BD., CLIMATE RISK: TECH. BULL. 2 (2016), https://legacy-assets.eenews.net/open_files/assets/2016/10/20/document_cw_01.pdf [https://perma.cc/PA8T-QB4F] (finding that climate risk has a significant impact on seventy-two of the seventy-nine industries for which SASB has developed standards).

> cascading effects on portfolios and balance sheets and, therefore, systemic implications for financial stability.[120]

Institutional investor surveys also place climate-related financial risk as a high priority and one in which they expect greater specificity in corporate reporting and risk management.[121]

The limited studies to date suggest that some climate-related-risks are beginning to be priced in the markets,[122] and that companies with high carbon emissions or those that have higher climate-related risk exposure have a higher cost of equity capital and may exhibit greater volatility.[123] However, recent analyses by the G20's Financial Stability Board, the CFTC, and meta-studies of current climate risk research indicate that the state of available climate risk data and corporate disclosure does not allow markets to accurately price climate risk.[124]

Many companies lack historical data and are in the early stages of identifying sources of climate-related financial risk, many sectors have yet to develop standardized measures and data sources, and data on transition risk is only at a nascent stage.[125] As Madison Condon has explored, lack of asset-level data, reliance on outdated risk assessment models, and climate-blind risk management practices at the firm level prevent companies themselves from making accurate materiality assessments.[126] As she observes, when companies themselves are not making informed materiality assessments or lack incentives to disclose risk-

120. CFTC, *supra* note 74, at 26.

121. VASANTHAM & SHAMMAI, *supra* note 49, at 3 (reporting that 91% of survey respondents highlight climate change as their top sustainability area of focus for board engagement).

122. Stefano Giglio, Bryan Kelly & Johannes Stroebel, *Climate Finance* 14–24 (Nat'l Bureau of Econ. Rsch., Working Paper, 2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3719139 [https://perma.cc/7FHD-D343] (surveying the literature on climate risk and physical and financial assets). However, research on the efficiency of markets in pricing climate risks is ongoing and is subject to considerable methodological challenges. *Id.* at 10–13. *See generally* FIN. STABILITY BD., THE AVAILABILITY OF DATA WITH WHICH TO MONITOR AND ASSESS CLIMATE-RELATED RISKS TO FINANCIAL STABILITY 4 & tbls.1, 8, 34 (2021) [hereinafter FSB CLIMATE DATA REPORT], https://www.fsb.org/wp-content/uploads/P070721-3.pdf [https://perma.cc/2WX4-43K7] (identifying data gaps).

123. *See generally* Patrick Bolton & Marcin Kacperczyk, *Do Investors Care About Carbon Risk?*, 142 J. FIN. ECON. 487 (2021) (finding a risk premium related to carbon emissions risk); Balvers et al., *supra* note 114 (finding that temperature shocks are associated with a higher cost of capital); *see also* Atz et al., *supra* note 9, at 20–22 (finding consistent evidence from a broad dataset of studies since 2015 that ESG investment strategies have a kind of "insurance effect" on portfolio risk during social or economic crisis).

124. CFTC, *supra* note 74, at 26–27 and sources cited therein ("Evidence is accumulating that markets are pricing in climate-related risks imperfectly, and sometimes not at all."). *See generally* FSB CLIMATE DATA REPORT, *supra* note 122, at 4 & tbls.1, 8, 34 (observing that data limitations are more significant for firms and financial institutions with respect to longer-term scenarios, and that "past changes in climate may also be a particularly poor guide to future climate-related [systemic] risks). *See also* Atz, et al., *supra* note 9, at 23–34 (concluding from a meta-analysis of research on climate risk pricing that while the "literature is converging upon the existence of a climate risk premium, . . . [it] does not seem to be accurately priced by the market as it stands now.").

125. This notwithstanding modest improvements in the level of corporate climate-related financial disclosure internationally. TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES, TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES: 2019 STATUS REPORT iv (2019) [hereinafter TCFD 2019 Status Report], https://www.fsb.org/wp-content/uploads/P050619.pdf [https://perma.cc/Z6D3-M9WD]; *see also* CFTC, *supra* note 74, at 55–65.

126. Condon, *supra* note 94, at 16–21 (discussing why companies themselves may be unable to assess climate-related financial risk).

related information, climate risk is mispriced in the capital markets.[127] Given the evidence that climate risk blind spots are persistent and widespread, hidden climate risk could precipitate the kind of systemic risk events about which the TCFD and the CFTC have warned.

In addition, companies' own impacts on climate change and their failure to mitigate those impacts also contribute to systemic climate risk, both by exacerbating physical, regulatory, and transition risks to the firm itself or to others, and by contributing to worsening climate conditions.[128] But these effects are unlikely to be reported if firms are ignorant of these risks or are reporting only financial risk *to the reporting company and its investors*. Indeed, it will be impossible to reduce systemic climate risk without requiring companies to report on their own contributions to climate change. Lasting solutions to climate change will also require changes in corporate governance and other operational changes as part of a post-carbon transition. This will require alignment with climate change policy goals that extend beyond the financial system. Such goals currently drive how disclosure is used within environmental regulation and in voluntary sustainability reporting regimes,[129] but they go beyond the traditional goals of disclosure under the securities laws. Reducing climate-related financial risk may therefore prove impossible without a concurrent effort to mitigate corporate climate impacts more broadly.

To be sure, there are a number of other ways that mandatory reporting requirements could indirectly reduce climate-related financial risk and also change corporate practices that contribute to climate change. First, transparency around climate-related financial risk, even if imperfect, may motivate companies to pay closer attention to their climate impacts and risk management.[130] It may also bring companies under greater scrutiny from regulators, shareholder activists, and other stakeholders, giving companies incentives to reduce their carbon footprint.[131] A recent study by Downar et al. supports these conclusions; the study found that after the introduction of the UK's GHG emissions disclosure mandate, affected companies did in fact reduce their GHG emissions in response to the new requirements.[132]

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127. *Id.* at 11–16 (citing evidence that the market is mispricing physical and transition risk associated with climate change).

128. *See* 2010 Climate Guidance, *supra* note 25, at 6 ("In addition to legislative, regulatory, business and market impacts related to climate change, there may be significant physical effects of climate change that have the potential to have a material effect on a registrant's business and operations.").

129. *See* Harper Ho & Park, *supra* note 27, at 273–76 (discussing the use of disclosure as a soft regulatory tool); *see also* Daniel C. Esty & Quentin Karpilow, *Harnessing Investor Interest in Sustainability: The Next Frontier in Environmental Information Regulation*, 36 YALE J. ON REGUL. 625, 636–38 (2019) (discussing "information regulation" under the environmental laws as a "regulatory stick" against laggards).

130. *See generally* Lowenstein, *supra* note 31 (discussing how focusing companies on an issue can motivate better management).

131. *See* Christensen et al., *supra* note 64, at 69–72 (discussing the pre-conditions for sustainability disclosure to lead to lower negative externalities through stakeholder pressure).

132. Benedikt Downar, Jürgen Ernstberger, Stefan Reichelstein, Sebastian Schwenen & Aleksandar Zaklan, *The Impact of Carbon Disclosure Mandates on Emissions and Financial Operating Performance,* 26 REV. ACCT. STUD. 1137, 1137 (2021) (finding no detrimental effect on financial performance associated with an approximately 8% reduction in emissions relative to a control group of European firms).

The systemic nature of climate risk therefore presents a stronger justification for mandatory climate-risk disclosure, greater specificity in the design of climate-risk disclosure rules, and rapid standardization and implementation of a reporting framework that goes beyond the rationales for ESG disclosure reform outlined above. To be sure, securities regulators like the SEC are not the primary regulatory authorities charged with managing systemic risk in the financial markets.[133] As IOSCO has observed, however, securities regulators do have a role to play in mitigating systemic risk by adopting disclosure rules that can improve transparency.[134] Such measures also fall within the SEC's authority to protect investors and maintain orderly and efficient markets.[135]

4. *The Information Demands of a Sustainable Finance Transition*

Another source of rising demand for greater transparency around ESG information comes from international efforts to align financial systems with long-term sustainable development goals, including a post-carbon transition. International organizations and governments, most notably the EU, are already working to develop standardized approaches to ESG disclosure in order to integrate sustainability factors across global capital markets in areas ranging from asset pricing and oversight of green financial products to prudential regulation and credit risk assessment.[136] According to the European Union's 2018 sustainable finance roadmap:

> [S]ustainable finance is about two imperatives. The first is to improve the contribution of finance to sustainable and inclusive growth as well as the mitigation of climate change. The second is to strengthen financial stability by incorporating environmental, social, and governance (ESG) factors into investment decision-making.[137]

The first aspect concerns the real economy and the role of finance in advancing sustainability goals, while the latter relates directly to both systemic risk concerns and market efficiency goals. Further impetus for these reforms comes from the sheer scale of funding that is needed to make possible a post-carbon

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133. Troy A. Paredes, *On the Decision to Regulate Hedge Funds: The SEC's Regulatory Philosophy, Style, and Mission*, 2006 U. ILL. L. REV. 975, 999 (2006).

134. IOSCO, METHODOLOGY FOR ASSESSING IMPLEMENTATION OF THE IOSCO OBJECTIVES AND PRINCIPLES OF SECURITIES REGULATION 39–43 (2017), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD562.pdf [https://perma.cc/PV6R-4VNC] (discussing disclosure as one of the tools securities regulators have to "reduc[e] systemic risk" and "promot[e] financial stability"); *see also* Paredes, *supra* note 133, at 990–1004 (making similar observations).

135. *See* Hilary J. Allen, *The SEC as Financial Stability Regulator*, 43 J. CORP. L. 715, 716 (2018) (arguing that the SEC has authority to regulate to maintain financial stability under Section 2 of the Exchange Act).

136. EU Action Plan, *supra* note 28; *see also* EUR. SEC. & MKTG. AUTH. (ESMA), STRATEGY ON SUSTAINABLE FINANCE (2020) [hereinafter ESMA], https://www.esma.europa.eu/sites/default/files/library/esma22-105-1052_sustainable_finance_strategy.pdf [https://perma.cc/6MWT-K7U5].

137. EU HIGH-LEVEL EXPERT GRP. ON SUSTAINABLE FIN., FINANCING A SUSTAINABLE EUROPEAN ECONOMY 6 (Jan. 31, 2018), https://ec.europa.eu/info/files/180131-sustainable-finance-final-report_en [https://perma.cc/E97D-DY64] [hereinafter HLEG REPORT ON SUSTAINABLE FINANCE]; *see also* UNEP & WORLD BANK, *supra* note 3, at 20 ("[A] financial system that integrates sustainability considerations into its operations, including the full costing of positive and negative externalities . . . leading to a reorientation of the flow of resources toward more inclusive and sustainable activities.").

transition,[138] and the need for standard definitions for "green" financial products across national and global markets.[139] While consideration of the standards that should apply to such products as a matter of U.S. law are beyond the scope of this Article, the SEC is currently reviewing such issues.[140]

Investor protection, allocating capital more cheaply toward long-term, low-carbon uses, and ensuring the accurate pricing of ESG risks are all goals that require investment-grade data on climate risk, environmental impacts, and other ESG factors. Some of this information may be material to investors or become material over time, but other information needed to direct capital toward sustainable uses reflects primarily the significant positive and negative impacts of corporate activity on corporate stakeholders and the natural environment.[141] Indeed, jurisdictions that have led in the development of ESG disclosure standards, including the European Union, China, and the United Kingdom, have done so in part to implement broader sustainable development goals and encourage greater corporate accountability for environmental, human rights, and other impacts.[142] As a result, ESG disclosure reform in these jurisdictions is increasingly prescriptive and has not been limited to information that is material to the reporting company and its investors.[143] There is early evidence that these kinds of disclosure mandates can in fact cause companies to change risky practices that result in negative ESG incidents and external harms.[144] A strong policy commitment to a sustainable finance transition will therefore require an approach to ESG disclosure that goes beyond instrumental financial goals.

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138. INT'L ENERGY AGENCY, ENERGY AND CLIMATE CHANGE: WORLD ENERGY OUTLOOK: SPECIAL BRIEFING FOR COP21 4 (2015), http://climate-action.engin.umich.edu/figures/Rood_Climate_Change_AOSS480_Documents/IEA_COP21_Paris_Briefing_IntEnerAgen_2015.pdf [https://perma.cc/BR54-ZM47] (estimating that meeting Paris Agreement targets will require a $13.5 trillion investment in the energy sector alone). According to the United Nations, between USD $5 and $7 trillion is needed to achieve its 2030 Sustainable Development Goals. Mara Niculescu, *What Kind of Blender Do We Need to Finance the SDGs?*, UNITED NATIONS DEV. PROGRAMME (July 12, 2017), https://www.eurasia.undp.org/content/rbec/en/home/blog/2017/7/12/What-kind-of-blender-do-we-need-to-finance-the-SDGs-.html [https://perma.cc/YN7S-3QRL].

139. Again, this is the primary goal of the EU's green finance taxonomy. EU Taxonomy, *supra* note 103, at 5. *See generally* AMAC Recommendations, *supra* note 18 (proposing that the SEC suggest transparency best practices for green investment products).

140. SEC, THE DIVISION OF EXAMINATIONS' REVIEW OF ESG INVESTING 1 (2021) [hereinafter SEC Risk Alert], https://www.sec.gov/files/esg-risk-alert.pdf [https://perma.cc/L7ZE-6PSN].

141. IAC, *supra* note 14, at 7.

142. *See* IIF, *supra* note 73, at 10 (identifying as of 2020 twenty-five countries with sustainable finance roadmaps). For a survey of international sustainable finance initiatives, see generally IOSCO, SUSTAINABLE FINANCE, *supra* note 64.

143. *See* Dániel G. Szabó & Karsten E. Sørensen, *New EU Directive on the Disclosure of Non-Financial Information (CSR)*, 3 ECFR 307, 313 (2015) (regarding the scope of the European non-financial reporting directive). *See generally* EUR. SUPERVISORY AUTHS., JOINT CONSULTATION PAPER: ESG DISCLOSURES (2020), https://www.esma.europa.eu/sites/default/files/jc_2020_16_-_joint_consultation_paper_on_esg_disclosures.pdf [https://perma.cc/M4AW-XXX4] (presenting draft mandatory technical standards to govern disclosures in accordance with the European Union's Sustainable Finance Disclosure Regulation (SFDR)).

144. A recent study by Krueger et al. from twenty-five countries that have introduced mandatory ESG disclosure shows that it can have real effects on corporate behavior in reducing ESG risk events, defined as ESG-related incidents significant enough to be reported in the news. *See generally* Krueger et al., *supra* note 82; Downar et al., *supra* note 132 (finding reductions in GHG emissions in the U.K. after the introduction of reporting mandates).

5. The Case for Disclosure Reform: A Synopsis

In sum, the case for ESG disclosure reform rests on multiple justifications, depending on its ultimate objectives. First are traditional economic and market-oriented rationales based on the materiality of ESG information. These include demand for "decision-useful" ESG information from mainstream investors in response to the limitations of voluntary sustainability reporting, on the one hand, and under-reporting of material ESG information in public filings, on the other. ESG risks, including climate risk, are of concern to "common owners" and other highly diversified investors because they contribute to the systemic risk of the market portfolio. Expanding ESG disclosure to meet these goals aligns with the SEC's core mission to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation.[145] Further justification for ESG disclosure reform rests on the established benefits of mandatory disclosure, which include incentivizing better risk management and a level playing field for all reporting companies and investors.[146] The core arguments in favor of ESG disclosure reform therefore align with mainstream investors' economic objectives, as well as with the economic goals of SRI investors.[147]

Climate-risk disclosure reform, however, is justified on both economic and public policy grounds. To the extent that systemic risk from climate change itself or from market-wide blind spots around climate-related financial risk threatens "fair, orderly, and efficient markets," climate-risk disclosure reform lies within the SEC's current statutory authority.[148] Because many environmental risks and impacts are closely related to climate change, some environmental disclosures may be justified on that basis. Requiring disclosure of environmental risk that is not climate-related may nonetheless be justified if it is material to a firm or its investors.

In addition, both the Securities Act of 1933 and the Exchange Act of 1934 provide that when the SEC "is engaged in rulemaking and is required to consider whether an action is necessary or appropriate in the public interest, [it] shall also consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation."[149] This language clearly indicates that the SEC may properly consider or take action in "the public interest."[150] As I and other commentators have noted, the SEC's statutory authority

145. *See* Regulation S-K Concept Release, *supra* note 15, at 23921 (stating the SEC's statutory authority in these terms).

146. For a more complete discussion, see Harper Ho, *Private Ordering*, *supra* note 30, at 435–56.

147. On the scale of SRI investment, see *supra* note 11.

148. *See* source cited *supra* note 135 and accompanying text.

149. Securities Act of 1933, 15 U.S.C. § 77b(b), 77g(a)(1) (2018); *see also id.* § 77s(a); Securities Exchange Act of 1934, 15 U.S.C. § 78(c)(f) (2018); Investment Company Act of 1940, Section 2(c), 15 U.S.C. § 80a-2(c) (2018).

150. Leading securities law experts have argued that "publicness" is a defining feature of securities law. *See, e.g.*, Donald C. Langevoort & Robert B. Thompson, "*Publicness" in Contemporary Securities Regulation After the JOBS Act*, 101 GEO. L.J. 337, 375–83 (2013) (discussing how the "publicness" of listed companies is foundational to federal securities law); Hillary A. Sale, *Public Governance*, 81 GEO. WASH. L. REV. 1012, 1017–31 (2013) (discussing the same).

to mandate disclosure is not constrained by the definition of materiality that applies for purposes of assessing issuer liability for a material omission under Rule 10b-5.[151] It also requires the SEC to protect investors and promote robust and competitive capital markets, both of which are goals that necessitate information transparency.

It is less certain that the SEC can, absent Congressional authorization, adopt rulemaking to pursue the behavioral goals that are at the heart of sustainability reporting frameworks, environmental information reporting, and private regulatory regimes.[152] Such goals include incentivizing companies to reduce their carbon footprint, pursue more sustainable business strategies, implement corporate governance reforms, or mitigate environmental and climate risks from the company's operations. In the past, the SEC has adopted disclosure rules that are clearly directed at changing corporate behavior, such as corporate governance disclosures designed to compel companies to adopt codes of ethics, adhere to director independence standards, or implement risk oversight and risk management systems. However, because these reforms have generally been taken at the behest of Congress,[153] corporate governance disclosures intended to promote ESG risk management, environmental protection, and climate change mitigation, or to accelerate a post-carbon transition may proceed most easily under Congressional authorization, as discussed in Part IV.[154]

The same is true of broader sustainable finance reforms. Other than climate-related financial risk, which the SEC has authority to regulate in the interest of market stability,[155] the goals of sustainable finance reform—promoting sustainable development, "inclusive growth," and speeding a post-carbon transition—cannot be justified solely on an economic "business case" at the firm or portfolio levels, by investor demand, or by the need to maintain safe, orderly, and efficient markets. For this reason, the SEC has been less receptive to calls from SRI investors for ESG information that may better enable them to align voting and investment strategies with ethical or public policy goals.

Therefore, this Article will distinguish approaches the SEC can take to modernize ESG disclosure between (i) those that rest on market- and investor-oriented grounds, including systemic risk concerns, and (ii) those that are directed at mitigating the impacts of corporate operations on the environment and external stakeholders but are not otherwise justified under (i). Climate-related financial risk and other material ESG risks fall within category (i), while companies' own environmental, climate, and stakeholder impacts will generally fall

151. Letter from Jill E. Fisch, Professor, Univ. of Pennsylvania L. Sch. et al., to Gary Gensler, Chair, SEC (June 11, 2021), at 13, https://www.sec.gov/comments/climate-disclosure/cll12-8911728-244385.pdf [https://perma.cc/B8KS-8L3H].

152. On the behavioral goals of transparency in these arenas, see, for example, Harper Ho & Park, *supra* note 27, at 273–76; Esty & Karpilow, *supra* note 129, at 636–38.

153. *See generally* Regulation S-K Study, *supra* note 34 (discussing throughout changes to Regulation S-K introduced under the Dodd-Frank Act and Sarbanes-Oxley). For examples of these reforms, see also Langevoort & Thompson, *supra* note 150, at 377; Sale, *supra* note 150, at 1018–19.

154. *See* discussion *infra* Part IV.

155. *See generally* Allen, *supra* note 135 and accompanying text.

within category (ii), unless again they give rise to material regulatory, reputational, or other risks. These recommendations are presented in Parts III and IV, respectively.

B. Responding to ESG Disclosure Reform Objections

As the above synopsis indicates, some quarters of the business community as well as some current and former SEC commissioners have opposed any form of mandatory ESG disclosure, notwithstanding the pace of disclosure reform outside the United States and rising demand for investment-grade ESG information.[156] The key objections have to do with questions about its financial materiality, whether ESG disclosure reform is within the authority of the SEC, and the anticipated compliance costs and litigation risk associated with new reporting obligations.[157] These issues also have direct bearing on the scope and form ESG reporting standards may take, as Part III explains. The following discussion responds to these objections.

1. Immateriality: Investor Overload & Mission Creep.

The primary objection to ESG disclosure reform that has frequently been raised by the business community is that requiring ESG disclosure will elicit immaterial information, which is costly to companies, and will overload investors and obscure material information.[158] The strong form of this argument, that ESG information is categorically immaterial, is no longer widely held.[159] More prevalent is the weaker form, which holds that ESG information is only material to a limited extent and that it is too difficult to identify specific ESG information that is material for all companies.[160]

A related objection that has been raised by the Chamber of Commerce and other business advocates is that demand for ESG disclosure reform is simply a

156. *See, e.g.*, Hester M. Peirce, *Remarks at Meeting of the SEC Investor Advisory Committee* (May 21, 2020), https://www.sec.gov/news/public-statement/peirce-statement-investor-advisory-committee-meeting-052120 [https://perma.cc/8QTY-K5EX] (describing ESG disclosure reform as unnecessary); Public Statement, Elad L. Roisman, Comm'r, SEC, Statement by Commissioner Roisman at the Meeting of the Asset Management Advisory Committee (Dec. 1, 2020), https://www.sec.gov/news/public-statement/roisman-statement-amac-meeting-120120 [https://perma.cc/6Y6X-C97S] (expressing similar concerns).

157. All of these questions were explored in the SEC's Regulation S-K Concept Release, *supra* note 15, at 23971–72.

158. CCMC (2017), *supra* note 86, at 13–14. I have responded to this objection more fully in prior work. *See generally* Harper Ho, *Private Ordering*, *supra* note 30.

159. *See, e.g.*, CMCC (2018), *supra* note 75, at 8–11, 33–35 (acknowledging ESG materiality and the need for standardization).

160. *See, e.g.*, Hester M. Peirce, *My Beef with Stakeholders: Remarks at the 17th Annual SEC Conference, Center for Corporate Reporting and Governance*, HARV. L. SCHOOL F. ON CORP. GOVERNANCE & FIN. REGUL. (Sept. 24, 2018), https://corpgov.law.harvard.edu/2018/09/24/my-beef-with-stakeholders-remarks-at-the-17th-annual-sec-conference-center-for-corporate-reporting-and-governance/ [https://perma.cc/JRW5-UY8U]. Data from the Regulation S-K Concept Release comments indicate that objections to ESG disclosure reform may be more due to concerns about prescriptive disclosure generally, rather than a categorical rejection of ESG materiality. *See* Harper Ho, *Disclosure Overload?*, *supra* note 49, at 129–31.

cover for "social and political change" that is extraneous to the SEC's mission.[161] These concerns relate to the diverse goals of ESG disclosure, its origins in stakeholder-oriented voluntary reporting and shareholder proposals, and the strong demand for ESG information and investment products from the SRI investing community. In its Regulation S-K Concept Release, the SEC asked for public comment on whether it had the authority to engage in rulemaking around sustainability disclosure, but responses from investors and business advocates were sharply divided.[162] Several SEC commissioners have also expressed concerns that rulemaking around ESG matters, with the possible exception of corporate governance, is beyond the SEC's core expertise and will result in "mission creep" as investors raise unending demands for disclosure rulemaking on evolving ESG issues.[163]

These arguments have lost force in the face of evidence of the financial materiality of many ESG factors, as international financial regulators have sounded the alarm about the systemic risk effects of climate change, and as IOSCO and the SEC's counterparts abroad have endorsed or implemented ESG reporting frameworks that are increasingly mandatory and prescriptive.[164] The concern about mission creep is also undercut by the fact that the SEC and its counterparts abroad are already leveraging cross-agency collaboration to supply additional expertise and capacity in areas like environmental or climate risk that are beyond their traditional purview, and are also drawing guidance from internationally recognized standards and frameworks that many companies are already using.[165] As Part III discusses, the real question then is not whether ESG matters are relevant to the work of securities and financial regulators, but instead how the SEC can harness these resources to craft disclosure rules that will achieve their intended goals.[166]

Resistance to new regulation has led the business community to emphasize the power of private ordering alone to standardize ESG disclosure standards and practice. For example, companies and business advocates tend to prefer reporting rules that rest on the ability of companies themselves to judge what should be disclosed, and to look to investors to use the tools of shareholder activism to

161. Over 60% of Regulation S-K Concept Release comments from issuers and business advocates expressed this view, although the total number of responses from these groups on this question was limited. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 153, tbl.19 (reporting responses to Question 220); *see also* Amanda Rose, *A Response to Calls for SEC-Mandated ESG Disclosure*, 98 WASH. U. L. REV. 1821, 1833 (2021) (raising these concerns).

162. Regulation S-K Concept Release, *supra* note 15, at 23922, 23970. On the contrasting responses, see sources cited *supra* note 161.

163. *See* Rose, *supra* note 161, at 27 (raising concerns about SEC enforcement capacity if ESG reporting is mandatory).

164. *See supra* Part II (discussing these developments).

165. For example, the European Union's technical expert group on sustainable finance (TEG) included diverse experts from a range of fields, as well as academics, civil society groups, and representatives of various governmental authorities. EUR. COMM'N, *Technical Expert Group on Sustainable Finance (TEG)* (July 15, 2020), https://ec.europa.eu/info/publications/sustainable-finance-technical-expert-group_en [https://perma.cc/94L8-V6T2].

166. *See* discussion *infra* Part III.

remedy any deficiencies.[167] They have also argued that the solution to the fragmentation among reporting standards is for private standard setters to consolidate and harmonize standards and ratings voluntarily.[168] While consolidation and harmonization is certainly occurring,[169] and shareholder engagement will continue to drive some forms of corporate reporting on a case-by-case basis, these efforts are insufficient to standardize ESG information disclosure even if competitive incentives among private standard setters that impede harmonization are overcome.[170] Indeed, one of the widely recognized benefits of mandatory disclosure is that it gives all investors equal access to timely, reliable, and comparable information, reducing the costs investors would otherwise incur to find information that is readily available within firms and its reliability.[171]

2. The Costs of Expanding Mandatory ESG Disclosure.

The SEC has also expressed concern that expanding mandatory disclosure could increase compliance costs and litigation risk for issuers.[172] In addition, if expanded reporting requirements drive companies to stay private or list elsewhere, ESG disclosure could be challenged as impairing capital formation and weakening the competitiveness of the public capital markets.[173] ESG disclosure reform could therefore contravene the SEC's statutory mandate to consider the effect of any new rule or regulation on competition.[174] Since any new rulemaking must also undergo a cost-benefit analysis,[175] and since Congress directed the SEC to undertake its disclosure reform project in part to simplify and streamline the reporting rules,[176] the SEC has been particularly mindful of these concerns.

167. *See, e.g.*, CMCC (2018), *supra* note 75, at 6. Academic commentators have also advocated these alternatives. *See also* Rose, *supra* note 161, at 1854 (arguing that shareholder proposals are an adequate substitute).

168. *See, e.g.*, CMCC (2018), *supra* note 75, at 33 ("[The] private sector is capable of developing a single set of consensus-based reporting criteria.").

169. For example, the International Integrated Reporting Council (IIRC) has organized the Corporate Reporting Dialogue (CRD) in collaboration with the Financial Accounting Standards Board, the International Accounting Standards Board, the International Organization for Standardization (ISO), the GRI, the CDSB, and the CDP to "promote greater coherence, consistency[,] and comparability between corporate reporting frameworks" and adopt a common set of materiality principles. *See About*, CORP. REPORTING DIALOGUE, https://corporatereportingdialogue.com/about/ (last visited Nov. 20, 2021) [https://perma.cc/9T37-ZMXE].

170. The obstacles to standardization are discussed further in Harper Ho, *Private Ordering*, *supra* note 30, at 451.

171. Goshen & Parchomovsky, *supra* note 95, at 741–43, 758; *see also* Harper Ho, *Private Ordering, supra* note 30, at 438–40 (reviewing these rationales and referencing related authorities).

172. Regulation S-K Concept Release, *supra* note 15, at 23919, 23960; *see also* Rose, *supra* note 161, at 1847 (discussing private liability risks associated with disclosure).

173. Regulation S-K Concept Release, *supra* note 15, at 23919; CMCC (2018), *supra* note 75, at 30; SEC. IPO TASK FORCE, REBUILDING THE IPO ON-RAMP (2011), https://www.sec.gov/info/smallbus/acsec/ipotaskforceslides.pdf [https://perma.cc/FAG7-7BDR] (assessing the disincentives compliance obligations present to public listings).

174. *See* sources cited *supra* note 149 and accompanying text.

175. For a discussion of the caselaw that has effectively required quantitative cost-benefit analysis for SEC rulemaking, see Jeff Schwartz & Alexandrea Nelson, *Cost-Benefit Analysis and the Conflict Minerals Rule*, 68 ADMIN. L. REV. 287, 294–99 (2016).

176. FAST Act, *supra* note 1, § 71003.

It has therefore emphasized principles-based disclosure approaches that offer greater flexibility to reporting companies.[177]

Although the potential costs to issuers must inform future rulemaking or legislation in this area, these costs must be weighed against the costs of the current system and the economic and human costs of further inaction with respect to climate-related risk.[178] In such an analysis, compliance costs to issuers should be offset, perhaps substantially, by the cost savings of ESG standardization to investors and to issuers themselves.[179] The SEC should also take account of the benefits of improved risk management practices that should be expected from the reforms proposed here.

Moreover, the compliance costs and legal risks of enhanced ESG disclosure may be more modest than anticipated. First, as some investors have noted, many public companies may experience a lower compliance cost increase, since the vast majority already produce sustainability reports.[180] The primary cost increases are likely to come instead from the costs of external assurance and of enhanced internal procedures and controls needed to ensure the reliability of ESG information that is incorporated into the public filings.

Concerns about the increased litigation risk associated with expanded disclosure deserve consideration from the SEC and Congress. However, much of the demand for ESG information at present is for forward-looking information, which is already subject to litigation safe harbors under the securities laws.[181] With respect to new disclosure of historical information, the potential for expanded shareholder vigilance should promote greater attention to the accuracy and completeness of this information. Moreover, concerns about the added risk exposure that may result from more prescriptive disclosure rules should also take into account the fact that alleging securities fraud based on material omissions,[182]

177. William H. Hinman, *Applying a Principles-Based Approach to Disclosing Complex, Uncertain and Evolving Risks*, SEC (Mar. 15, 2019), https://www.sec.gov/news/speech/hinman-applying-principles-based-approach-disclosure-031519 [https://perma.cc/VT6F-59LA]; *see also* Regulation S-K Concept Release, *supra* note 15, at 23972 n.697 and accompanying text.

178. One measure of these costs is the social cost of carbon, which the Biden administration has recently quantified. INTERAGENCY WORKING GRP. ON SOC. COST OF GREENHOUSE GASES, U.S. GOV'T, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 (2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf [https://perma.cc/DT7T-EHCB].

179. The SEC may draw some guidance on the potential costs of a failure to improve standardization, as well as the costs of new reporting mandates, from the European Commission's impact assessment on its proposed Corporate Sustainability Reporting Directive (CSRD), *supra* note 7. *See generally Commission Staff Working Document Impact Assessment*, SWD (2021) 150 final (Apr. 21, 2021), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021SC0150&from=EN [https://perma.cc/AMH6-8QUN]; *Commission Staff Working Document Executive Summary of the Impact Assessment*, SWD (2021) 151 final (Apr. 21, 2021), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021SC0151&from=EN [https://perma.cc/3839-UAFB]. Both include estimates of potential impacts on small and medium-sized enterprises (SMEs).

180. Harper Ho, *Disclosure Overload?, supra* note 49, at 122 (reporting this data and related examples).

181. *See, e.g.*, Private Securities Litigation Reform Act (PSLRA), 15 U.S.C. § 77z-2 (2018); 15 U.S.C. § 78u-5 (2018).

182. For a general review of the circuit split regarding on the question of whether Rule 10b-5 liability can attach for an omission in the face of a mandatory disclosure obligation, see generally Allan Horwich, *A Call for the SEC to Adopt More Safe Harbors that Limit the Reach of Rule 10b-5*, 74 BUS. LAW. 53, 59–64 (2018).

opinions,[183] or soft, generalized statements about risk and risk management[184] is difficult under existing law, even in the absence of new safe harbors and defenses that could be introduced to encourage more precise and informative ESG disclosures. Some of these possibilities are considered in Part IV below.

The arguments regarding the effect of ESG disclosure reform on capital formation and the competitiveness of U.S. capital markets are undercut by global regulatory developments around ESG reporting. The fact that regulators in the European Union, the United Kingdom, China, and other leading capital markets have already mandated ESG disclosure means that introducing similar standards is unlikely to reduce the competitiveness of U.S. markets.[185] In fact, as more economies worldwide pursue a sustainable finance transition, aligning U.S. regulation with emerging international standards may improve investor confidence in domestic markets and ultimately facilitate capital formation; conversely, failing to improve ESG transparency may hurt U.S. market competitiveness. Moreover, the SEC has recognized that mandatory disclosure is essential to capital formation:

> Lowering information asymmetries between managers of companies and investors may enhance capital formation and the allocative efficiency of the capital markets. . . . [Disclosure] may lead to more accurate share prices, discourage fraud, heighten monitoring of the managers of companies, and increase liquidity.[186]

As for concerns that added compliance obligations will discourage public listings, other governments have responded by working to extend disclosure mandates across the economy rather than by ignoring the costs of ESG blind spots to investors and the economy.[187]

Finally, new rulemaking can also be done in a way that gives smaller reporting companies (SRCs) and emerging growth companies (EGCs) additional time to adjust to new expectations, as Part III recommends. Such measures could also alleviate potential disincentives to pursue a public listing.[188] In sum, consideration of the costs and benefits of new disclosure rules needs to be forward-

183. *See generally* Omnicare, Inc. v. Lab. Dist. Council Constr. Ind. Pension Fund, 575 U.S. 175 (2015) (establishing the standard of liability for alleged material omissions in a registration statement under Section 11 of the Securities Act of 1933).

184. *See, e.g.*, *In re* Braskem S.A. Sec. Litig., 246 F. Supp. 3d 731, 741 (S.D.N.Y. 2017) (granting a motion to dismiss arising from general claims about corporate compliance and culture in the sustainability report). Whether "generic" statements can be actionable was at issue in the recent Supreme Court case *Goldman Sachs Grp. Inc. v. Ark. Tchr. Ret. Sys.*, 141 S. Ct. 1951, 1957 (2021).

185. *See* TCFD 2020 Status Report, *supra* note 113, at 71 (reporting that over 110 regulators support the TCFD, many of whom are mandating its use).

186. Regulation S-K Concept Release, *supra* note 15, at 23919.

187. *See Consultation Outcome: Mandatory Climate-related Financial Disclosures by Publicly Quoted Companies, Large Private Companies, and LLPs*, DEP'T FOR BUS., ENERGY, & INDUS. STRATEGY, https://www.gov.uk/government/consultations/mandatory-climate-related-financial-disclosures-by-publicly-quoted-companies-large-private-companies-and-llps [https://perma.cc/EL7Z-8PFZ] (Oct. 28, 2021) (announcing a goal to make TCFD-compliant climate disclosures mandatory economy-wide).

188. Scaled disclosure is available to smaller reporting companies, as defined in Item 10 of Regulation S-K. 17 C.F.R. § 229.10(f) (2020) (providing an index of the permitted scaled disclosures). On EGCs, see *infra* notes 271–73 and accompanying text.

looking with respect to the anticipated benefits of standardized disclosure and must take into account systemic risk concerns and the global context of sustainable finance reforms.

III. Modernizing Risk Disclosure: A Reform Path

The SEC has already made clear that its goal in pursuing ESG disclosure reform is to standardize how material ESG information is reported in public filings so that it will be consistent, comparable, and reliable.[189] Therefore, key considerations for the SEC are (i) the optimal scope of disclosure, (ii) how to balance comparability of information with the need for flexibility, and (iii) whether to draw on or endorse existing reporting frameworks and standards, or instead to develop new measures for U.S. issuers. This Part addresses these questions, and urges the SEC to adopt a multifaceted, tiered approach that will mandate ESG disclosures in three core areas that have been identified by investors as material to all companies: climate risk, corporate governance, and human capital. The SEC has also prioritized these areas for consideration, in addition to planned disclosures on cybersecurity risk governance, corporate board diversity and other matters.[190]

Within this framework, the SEC should follow the dominant international approach by supplementing these core mandatory disclosures with more flexible, principles-based approaches for sector-specific information where materiality is likely to vary widely across issuers. In addition to this tiered approach, the SEC should provide guidelines for firms' ESG materiality determinations to promote greater comparability. All of these recommendations can be adopted without additional legislative action, although as Part IV explains, Congressional authorization could facilitate such changes. Part IV also identifies other necessary reforms that Congress should adopt to advance a more comprehensive climate change response and a sustainable finance transition. It is important to note here that environmental risk factors that do not present systemic risk issues would still be addressed within the recommendations here if they are material to investors, and under Part IV's recommendations otherwise.

189. *See generally* Lee, *supra* note 18; Gary Gensler, Chair, SEC, Prepared Remarks at London City Week (June 23, 2021), https://www.sec.gov/news/speech/gensler-speech-london-city-week-062321 [https://perma.cc/8PA7-ZFGA].

190. Gensler, *supra* note 189; SEC Regulatory Agenda, *supra* note 20.

A. The Challenge of Risk Disclosure & the Limits of Prior Proposals

As a foundation, it is important to recognize that the types of reforms proposed here are particularly challenging because the information gaps they seek to remedy relate in no small part to forward-looking, risk-related information. In addition, the materiality of specific ESG factors varies by industry sector,[191] and evaluation of ESG materiality, like other risk assessments, is often based on estimates and assumptions, including estimates about the relevant timeframes and appropriate discount rates to apply to ESG costs and benefits.[192] All of these are subject to change as the risk environment changes. Indeed, some SEC commissioners have previously taken the position that these challenges caution against any attempt to standardize ESG disclosure.[193]

At the same time, investors are demanding increasingly specific, comparable, and verifiable forward-looking information, all factors that increase the reporting entity's risk of liability for material misstatements.[194] The data, indicators, and internal processes needed to assess emerging risks, such as climate-related financial risk, are also rapidly evolving. The SEC must therefore develop reporting approaches that are at once flexible enough to apply across sectors over time and specific enough to elicit material, firm-specific information about known risks that are difficult to quantify.

And time is of the essence. The climate crisis and the rapid introduction of mandatory ESG disclosure regimes outside the United States mean that the SEC, Congress, and other federal agencies must act quickly to adopt a course of action that can be implemented by reporting companies rapidly and not be stymied by decades of litigation and multiple rule-making cycles.

Current proposals do not adequately respond to these challenges. By committing to ESG disclosure reform, the SEC has already rejected the approach it took under the Trump administration, which was to rely on the current reporting framework and on companies to voluntarily produce more prescriptive and informative ESG disclosure in their public filings.[195] An alternative proposal by Andrew Winden would permit or encourage companies to furnish to the SEC the sustainability reports they already produce for the broader stakeholder community, as some companies have already done.[196] While this approach gives all investors equal access to sustainability information, it does not resolve the lack of

191. *See generally* Mozaffar Khan, George Serafeim & Aaron Yoon, *Corporate Sustainability: First Evidence on Materiality*, 91 ACCT. REV. 1697 (2016) (assessing the materiality of industry indicators developed by SASB); TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES, ANNEX: IMPLEMENTING THE RECOMMENDATIONS OF THE TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES 1 (2017) [hereinafter TCFD Annex], https://www.fsb-tcfd.org/wp-content/uploads/2017/12/FINAL-TCFD-Annex-Amended-121517.pdf [https://perma.cc/NG9K-4BF7] (providing sector-specific indicators).

192. *See* Harper Ho, *Private Ordering, supra* note 30, at 440–43.

193. *See, e.g.*, Clayton 2020 Statement, *supra* note 16.

194. *See* sources cited *infra* notes 411–12 and accompanying text (discussing safe harbors).

195. *See, e.g.*, Peirce, *supra* note 156 (asserting that a new ESG disclosure framework is an "unnecessary response" when the current framework "is very good at handling all types of material information").

196. *See generally* Winden, *supra* note 37.

comparability produced by the fragmentation of reporting standards; it therefore perpetuates the costs of voluntary reporting.[197]

These problems have plagued the implementation of the European Union's Non-Financial Reporting Directive, which prior to its amendment in 2021, allowed companies to comply by using existing sustainability reports.[198] Jill Fisch has recommended that companies be required to incorporate a separate narrative discussion in their public filings regarding sustainability matters, but this proposal suffers from the same limitations.[199]

Institutional investors and a number of commentators have urged the SEC to adopt its own prescriptive core and sector-specific disclosures based on frameworks adopted in Europe and Asia.[200] These derive, however, from a different statutory authorization than the one adopted in the federal securities laws. While these models may be the most effective if the United States decides to advance a broader sustainable finance agenda, they cannot be simply imported into the U.S. regulatory context. The same is true for the leading international climate risk disclosure framework developed by the TCFD, which, as I argue below, should be the basis of any future U.S. climate disclosure legislation or SEC rulemaking.[201]

Although this Article advocates the tiered approach that foreign stock exchanges and many international frameworks have used, simply urging the SEC to adopt rules or measures drawn directly from these frameworks or offering general support for international frameworks themselves does not aid the SEC in considering how such rules should be adapted and integrated into the current disclosure framework for risk-related disclosure. Such proposals also fail to address how the stakeholder-oriented materiality standard and indicators that are at the core of these international models can be harmonized with the narrower investor- and market-oriented scope of the U.S. securities laws in their present form. Adopting existing frameworks directly in full would also duplicate many disclosure rules already present in the U.S. framework.[202] The remainder of this

197. In response to the Regulation S-K Concept Release, investors voiced strong opposition to website-based ESG disclosure that is not presented in a consistent and accessible format and to reliance on voluntary sustainability reports that are designed for many audiences, subject to different materiality standards, and do not identify what information is material to investors. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 119–22.

198. 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) [hereinafter EU NFR Directive], *as amended* CSRD, *supra* note 7; *see* Szabó & Sørensen, *supra* note 143, at 333–37 (critiquing the EU Directive for its reliance on alternative framework and lack of an assurance mandate); CLIMATE DISCLOSURE STANDARDS BD., FALLING SHORT? 1 (May 2020), https://www.cdsb.net/falling-short [https://perma.cc/FU4Y-KVQ4] (identifying variations in disclosure format, limited use of performance indicators, and limited discussion of financial impacts in environmental and climate disclosures for the largest EU public companies).

199. *See, e.g.*, Fisch, *supra* note 37, at 952 (recommending the addition of a narrative "Sustainability Discussion and Analysis" section where material ESG issues could be disclosed).

200. *See, e.g.*, Esty & Karpilow, *supra* note 129, at 624.

201. For a discussion of how Regulation S-K can be amended to implement the TCFD framework, see *infra* Section III.C.

202. These overlapping areas include disclosures on board diversity, 17 C.F.R. § 229.407(h) (2020), and ESG risk factors. *See* sources cited *infra* notes 329–32 and accompanying text.

Article offers a different path forward that provides possible solutions to these challenges.

B. General Principles & the Scope of Disclosure

The basic principles that should guide public disclosure of material ESG information are widely recognized in international reporting frameworks and are consistent with the current federal reporting framework and U.S. GAAP. Although specific articulations vary, these general principles are that disclosures should (i) present relevant information based on applicable standards of materiality for the intended audience, (ii) be clear and understandable, (iii) be specific and complete, (iv) be consistent over time, (v) be comparable among companies within a sector, industry, or portfolio, (vi) be reliable, verifiable, and objective, (vii) be provided on a timely basis, and (viii) be presented in the annual report or other "mainstream" report.[203] To develop an approach to ESG disclosure that is consistent with these principles, the SEC must resolve key threshold issues, such as the frequency of disclosure, the potentially broad scope of ESG information that may be material to reporting companies, and which entities should be subject to ESG reporting requirements. This section takes up these questions first.

1. Defining ESG?

If the SEC elects to pursue the reforms presented here, it must first determine whether to define and use the terms "ESG," "nonfinancial," or "sustainability" with reference to broad categories of sustainability-related information. These terms are often used interchangeably by investors, but none currently appear in the federal securities laws. Because all of these terms are imprecise if used comprehensively, this Article recommends that the SEC use the term "ESG" only in interpretive guidance, and that it be defined broadly there to include all environmental, social, or governance information that is *or may become* material to the reporting company or its investors.[204] In new rule-making, however, the SEC should instead refer specifically to the particular corporate governance, climate-related, environmental, human capital, or other information covered by the rule.

Since the SEC must also consider how to ensure that the labeling of "sustainable" financial products is not misleading to investors and because

203. Similar principles have also been endorsed by IOSCO, the CFTC, the EU, and the SEC's Investor Advisory Committee. *See, e.g.*, IOSCO, *supra* note 5; CFTC, *supra* note 74, at 99; IAC, *supra* note 14; *see also* Communication from the Commission, Guidelines on Non-financial Reporting, 2017 O.J. (C 215) 1, 4. This list integrates principles from a number of internationally recognized standards. *See, e.g.*, TCFD 2017 Report, *supra* note 6, at 18; CLIMATE DISCLOSURE STANDARDS BD. & CARBON DISCLOSURE PROJECT, THE BUILDING BLOCKS: CONNECTING CDP DATA WITH THE CDSB FRAMEWORK TO SUCCESSFULLY FULFIL THE TCFD RECOMMENDATIONS 27 (2020), https://www.cdsb.net/sites/default/files/the_building_blocks_guidance_web_version.pdf [https://perma.cc/6BF3-AKZS]. Voluntary frameworks adopt similar principles but do not impose uniform materiality standards. *See, e.g.*, WEF Standards, *supra* note 4, at 11; GRI Standards, *supra* note 67.

204. The SEC declined to define the term "human capital" in its new disclosure rules under Item 101 for similar reasons. 2020 Final Rules, *supra* note 42, at 63739–40.

rulemaking associated with sustainable finance policies may require it, the term "sustainability" should be separately defined in accordance with emerging international standards for identifying sustainable activities and impacts. This definition could then be referenced in Regulation S-K. The highly detailed "taxonomies" developed by the EU for this purpose offer one approach.[205] Movement toward a uniform global definition of such core terms offers clear efficiencies, but further consideration of any future U.S. sustainability taxonomy and whether the SEC should reference or endorse the E.U. taxonomy or those being developed by private organizations is beyond the scope of this Article.[206]

2. Comparability, Reliability, & Integrated Reporting: Considering the "Where" and "When" of Disclosure.

In order to ensure that material ESG information is disclosed over reporting periods that are aligned with financial reporting and in a form that is consistent, comparable, and accessible, the recommendations presented here are designed to integrate material ESG information into the corporate annual reports, proxy statements, and other public filings of reporting companies in keeping with international best practice.[207] For the reasons set forth above, approaches that would depend on the filing, furnishing, or incorporating by reference of the full content of the corporate sustainability report within a public filing do not adequately identify material information. Accordingly, if the SEC allows this kind of integrated reporting as a means of complying with specific line item ESG disclosures,[208] it should require the company to include a table identifying the specific content in the sustainability report that is material and the disclosure provision(s) to which it responds. As Section C explains, these recommendations are generally intended to be adopted as amendments to Regulation S-K and to be incorporated into both annual and quarterly reporting.

Because of the long-term nature of environmental and climate-related information and the added complexity surrounding its disclosure, however, the SEC may wish to consider permitting such disclosures to be made only on an

205. *See generally* EU Taxonomy, *supra* note 103.

206. Another possible model is the investment product disclosure taxonomy developed by the Investment Company Institute, a private organization. INV. CO. INST., FUNDS' USE OF ESG INTEGRATION & SUSTAINABLE INVESTING STRATEGIES: AN INTRODUCTION 5 (2020), https://www.ici.org/system/files/attachments/20_ppr_esg_integration.pdf [https://perma.cc/KM4S-UY57]. This taxonomy has been recommended to the SEC by its Asset Management Advisory Committee. AMAC Recommendations, *supra* note 18, at 1. The CFA Institute is working on a similar initiative. CHARTERED FIN. ANALYST INST., EXPOSURE DRAFT: CFA INSTITUTE ESG DISCLOSURE STANDARDS FOR INVESTMENT PRODUCTS (2021) [hereinafter CFA INST.], https://www.cfainstitute.org/-/media/documents/support/ethics/exposure-draft-cfa-institute-esg-disclosure-standards-for-investment-products.ashx [https://perma.cc/Q2N9-5MC9].

207. Certain Regulation S-K disclosures related to corporate governance and executive compensation, among others, must also be included in corporate proxy statements under Regulation 14A. *See generally* 15 U.S.C. § 78n (2018); Schedule 14A, 17 C.F.R. § 240.14a-101 (2020).

208. Integrated reporting under the framework developed by the Value Reporting Foundation, formerly the International Integrated Reporting Council, is designed for investors, but integrates information reflecting other sources of value (*i.e.*, stakeholder-oriented "capitals") into the annual report or another report directed at investors. *See Frequently Asked Questions*, VALUE REPORTING FOUND., https://integratedreporting.org/FAQS/ (last visited Nov. 20, 2021) [https://perma.cc/LM84-RNCX].

annual basis, rather than in quarterly reports.[209] The European Union's mandatory ESG disclosures apply on an annual basis, and voluntary sustainability reporting is currently done on an annual basis by most companies, and often less frequently.[210] If the SEC were to require enhanced climate or ESG disclosures only annually, interim reporting on Form 8-K should continue to be required when necessary to maintain the accuracy of previously reported information.[211] Annual reporting would be less costly and would be more consistent with the frequency of corporate sustainability reporting that companies already produce. If the SEC adopts such an approach, it may also need to amend Regulation S-K to allow material risk factors under Item 105 and long-term environmental and climate-related trends and uncertainties in MD&A to be reported annually, rather than quarterly, as is now the case.[212]

3. *A Tiered Approach: General & Sector-Specific ESG Materiality*

Perhaps the most important foundational issue for any effort to modernize ESG disclosure is the question of the scope of disclosure, that is, what ESG information, exactly, is to be disclosed? Indeed, one of the greatest obstacles to mandating ESG disclosure is that the potential range of material ESG issues is vast due to the varied and evolving risks to which different companies are exposed. As a result, the SEC has largely relied on companies' own materiality judgments under rules that generally do not mention ESG factors directly and that elicit more narrative disclosure than quantitative information.[213]

This Article therefore recommends that the SEC adopt the two-tiered model that has already been widely used outside the U.S. and that forms the basic structure of most voluntary reporting frameworks.[214] The TCFD framework is also designed this way, and it appears to be the structure that the proposed global sustainability reporting standard will adopt.[215] Under this approach, the core ESG factors that are expected to be material across all sectors should be mandatory for all reporting companies.[216] In addition to mandating core factors, the

209. Annual reporting is the approach proposed in the CGIIPA, *supra* note 12, at § 403(5)(D) (proposing annual climate-related disclosure).

210. EU NFR Directive, *supra* note 198.

211. Form 8-K is used to provide disclosure of certain events and transactions under Sections 13 and 15(d) of the Exchange Act. *See* SEC, Current Report Pursuant to Section 13 OR 15(d) of The Securities Exchange Act of 1934 Form 8-K (2021) https://www.sec.gov/about/forms/form8-k.pdf [https://perma.cc/SY6H-F4R6].

212. *See* 17 C.F.R. §§ 229.105, 303 (2020).

213. The narrative discussion required in MD&A under Item 303 and in Item 105's risk factor disclosures are two examples. 17 C.F.R. § 229.103 (2020); 17 C.F.R. § 229.303 (2020).

214. TCFD 2017 Report, *supra* note 6, at 46. This approach was introduced in the mandatory ESG disclosure frameworks of the Hong Kong and Singapore stock exchanges, which differentiate between core, generally mandated disclosures and more specialized disclosures that must be reported on a comply-or-explain basis. Harper Ho & Park, *supra* note 27, at 309–12 (describing this approach). I have endorsed this model in prior work, as have other commentators. *See, e.g.*, Virginia Harper Ho, *"Comply or Explain" and the Future of Nonfinancial Reporting*, 21 LEWIS & CLARK L. REV. 317, 317 (2017) [hereinafter *Comply or Explain*]; Esty & Karpilow, *supra* note 129, at 630.

215. *See generally* TCFD 2017 Report, *supra* note 6.

216. An alternative would be to require such disclosures on a comply-or-explain basis, although this sacrifices comparability. *See infra* Section III.B.5 (weighing these concerns).

SEC would also require industry-specific disclosures based on designated frameworks that align with the definition of materiality under the federal securities laws, as discussed below.[217] Some of the latter could be reported under more flexible, principles-based disclosure methods in order to allow for firm-level variation, as Table 2 indicates.[218] By leveraging existing frameworks for prescriptive, industry-specific disclosures, namely the TCFD framework and the SASB materiality standards, this Article's approach offers greater comparability than prior proposals and encourages the SEC to use tailored reporting methods to increase flexibility.

As stated above, the core ESG dimensions that should be disclosed by all reporting companies in the standard disclosure tier are (i) climate-related financial risk, (ii) corporate governance, and (iii) human capital.[219] The SEC and the CFTC have already affirmed the materiality of climate-related financial risk and related corporate governance matters to companies across the economy, as well as the importance of this data to assessing threats to market stability.[220] The SEC has also previously acknowledged that corporate governance disclosure related to risk oversight and risk management should apply broadly to all companies;[221] Section D identifies where these core governance factors are included in the current framework and where they should be enhanced. Similarly, evidence from corporate practice and institutional investor surveys, as well as the workforce-related risks that have been revealed during the COVID pandemic, confirm the materiality of human capital information across all industries.[222]

217. *See* discussion *infra* notes 263–70 and accompanying text.

218. The EU has adopted a similar approach for climate-related disclosure. *See* EU TECH. EXPERT GRP. ON SUSTAINABLE FIN., REPORT ON CLIMATE-RELATED DISCLOSURES 24 (2019), https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/190110-sustainable-finance-teg-report-climate-related-disclosures_en.pdf [https://perma.cc/W8ZW-U73X] (dividing requirements into those that are mandatory for all companies (*i.e.*, "Type 1"), those that are recommended for all companies (*i.e.*, "Type 2") and suggested enhanced reporting (*i.e.*, "Type 3")). As noted above, the SASB materiality standards are industry-specific and are designed to be applied on a comply-or-explain basis. *See supra* note 229 and accompanying text.

219. Disclosure related to corporate environmental impacts that are not financially material and do not contribute to systemic climate risk will require legislative action and so is considered under Part IV.

220. CFTC, *supra* note 74; 2010 Climate Guidance, *supra* note 25.

221. *See* 2018 Cybersecurity Guidance, *supra* note 77, at 8170 (noting that cybersecurity risk management is subject to Item 407(h) board risk oversight disclosure).

222. *See, e.g.*, sources cited *supra* note 13 and accompanying text. On human capital management and related disclosure proposals, see generally George S. Georgiev, *The Human Capital Management Movement in U.S. Corporate Law*, 95 TUL. L. REV. 639 (2021). Workforce diversity disclosures, which have been identified by the current SEC as a priority, would fall within the scope of human capital disclosure. Allison Herren Lee, *A Climate for Change: Meeting Investor Demand for Climate and ESG Information at the SEC,* SEC (Mar. 15, 2021), https://www.sec.gov/news/speech/lee-climate-change [https://perma.cc/9HV8-3KE5]. The materiality of human capital management information leaves open the question of the specific disclosures that companies, or companies in different industries, should make.

4. Leveraging Private Standards & Advancing International Harmonization

With respect to its broader approach to disclosure, this Article urges the SEC to leverage established ESG reporting standards as the basis of both core disclosures that apply to all reporting companies and for sector-specific reporting. As the SEC's Investor Advisory Committee and regulators abroad have recognized,[223] requiring issuers to base ESG materiality judgments on an established private framework is the most efficient way to standardize disclosures cost-efficiently while creating flexibility for different industries and sectors is to require issuers to base ESG materiality judgments on an established private framework. For example, under Sarbanes-Oxley, the SEC did not develop its own standards for internal financial controls but instead endorsed the COSO framework by creating an enforcement safe harbor for companies who adopted it.[224] Similarly, the SEC has relied on private standards in crafting its final rules on extractive company disclosure.[225] Agency reliance on a private standard setter is permitted so long as the private entity is subordinate to the agency and operates under its authority and oversight.[226]

As the SEC is well aware, the leading private standards for identifying material ESG information as defined under the U.S. securities laws are those developed by the Sustainability Accounting Standards Board (SASB)/Value Reporting Foundation, now part of the ISSB, and the TCFD.[227] The SASB framework includes industry-specific measures for use in public filings, and has already been widely adopted by reporting companies.[228] Because the SASB materiality indicators are developed by companies in various industries, the standards can also adapt as new material factors emerge. The SASB standards currently apply on a comply-or-explain basis, which allows companies to explain why an indicator may not be material rather than compelling disclosure of information that may be material to the industry but not to the reporting firm.[229] The largest

223. *See* IAC, *supra* note 14.

224. *See* Final Rule, Management's Report on Internal Control Over Financial Reporting and Certification of Disclosure in Exchange Act Periodic Reports, 68 Fed. Reg. 36,636, 36,639–41 (June 18, 2003) (codified at 17 C.F.R. pt. 210, 228, 229, 240, 249, 270 & 274); COMM. OF SPONSORING ORGS. OF THE TREADWAY COMM'N (COSO), INTERNAL CONTROL-INTEGRATED FRAMEWORK 2 (2019), https://www.coso.org/documents/coso-crowe-coso-internal-control-integrated-framework.pdf [https://perma.cc/E77E-4E7A].

225. *See* Disclosure of Payments by Resource Extraction Issuers, 86 Fed. Reg. 4662, 4663 n.10 (Jan. 15, 2021) (discussing the SEC's reference to and incorporation of elements of the Extractive Industries Transparency Initiative (EITI) voluntary transparency standard).

226. Fisch et al., *supra* note 151, at 16–17 (noting that "the constitutional permissibility of such public-private partnerships is not in doubt" so long as these conditions are met); *see also* Jody Freeman, *The Private Role in Public Governance*, 75 N.Y.U. L. REV. 543, 639–40 (2003) (noting Congress' endorsement of agency reliance on rules set by private standard setters).

227. *Supra* note 8.

228. Press Release, Value Reporting Found., More than Half of S&P Global 1200 Now Disclose Using SASB Standards, (Sept. 21, 2021), https://www.valuereportingfoundation.org/news/more-than-half-of-sp-global-1200-now-disclose-using-sasb-standards/ [https://perma.cc/57ZA-7FS4].

229. SUSTAINABILITY ACCT. STANDARDS BD. (SASB), STANDARDS APPLICATION GUIDANCE 1–2 (2018), https://www.sasb.org/wp-content/uploads/2018/11/SASB-Standards-Application-Guidance-2018-10.pdf [https://perma.cc/WG74-QZUH].

institutional investors have also voiced strong support for the use of SASB standards in public filings.[230]

The SEC could leverage the SASB standards in a number of different ways. First, the SEC could distill particular ESG indicators from the SASB standards and incorporate them into its own rules. Because of the urgent need to standardize disclosure, and because of the static nature of such an approach, this Article does not recommend it.[231] Instead, the SEC should specify that reporting companies can comply with the industry-specific, principles-based reporting rules outlined in Table 3 if they base disclosure on the SASB/Value Reporting Foundation standards or the emerging ISSB global reporting framework, which is expected to incorporate them. Alternatively, the SEC could delegate standard-setting authority to the SASB/Value Reporting Foundation, or to a body associated with the Financial Accounting Standards Board (FASB), although this path may now be foreclosed because the consolidation of the Value Reporting Foundation into the ISSB in late 2021 may make establishing appropriate oversight for such a delegation infeasible.[232] Although some critics of this approach have argued that deferring to SASB or other private standard setters would impose additional costs on both the standard setter and the agency,[233] the widespread acceptance of SASB standards within the U.S. and abroad, the industry-specific nature of the standards, and the established processes already in place for revision of the SASB/Value Reporting Foundation standards over time cannot be duplicated in a cost-effective manner by the SEC.

For climate-related risk, the TCFD framework is the established international framework and has been endorsed by the IFRS Foundation as the basis of its efforts to develop a global sustainability reporting standard.[234] The TCFD has also already been identified as the default framework a possible baseline in the climate disclosure proposals that are being considered in Congress at the time of

230. *See, e.g.*, 2020 GAO REPORT, *supra* note 61, at 16–17 (discussing asset-manager support for the SASB and TCFD frameworks); *see also* VASANTHAM & SHAMMAI, *supra* note 49, at 4, (finding that over 80% of institutional investors surveyed recommend reporting based on the SASB framework and that 77% recommend the TCFD framework for reporting climate-related financial risk). Both frameworks have also been endorsed by the "Big Three" (*i.e.*, Blackrock, State Street, and Vanguard). *The Rise of Standardized ESG Disclosure Frameworks in the United States*, SULLIVAN & CROMWELL (June 8, 2020), https://www.sullcrom.com/files/upload/SC-Publication-Rise-Standardized-ESG-Disclosure-Frameworks.pdf [https://perma.cc/SSQ3-WYN6] (discussing measures each has taken to encourage or compel the use of these frameworks by portfolio companies).

231. *But see* Esty & Karpilow, *supra* note 129 (recommending such an approach).

232. For commentary on FASB's potential as the appropriate advisory body, see generally Richard Barker & Robert G. Eccles, *Should FASB and IASB Be Responsible for Setting Standards for Nonfinancial Information?* (Univ. of Oxford Green Paper, Oct. 12, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3272250 [https://perma.cc/L7CG-ZPNS]. On the ISSB consolidation, see *supra* note 8.

233. Fisch et al., *supra* note 151, at 17.

234. FIN. STABILITY BD., REPORT ON PROMOTING CLIMATE-RELATED DISCLOSURES 1 (2021), https://www.fsb.org/wp-content/uploads/P070721-4.pdf [https://perma.cc/FF37-24QP] (noting that most jurisdictions adopting climate disclosure mandates have done so with reference to the TCFD framework); *see also More than 1,000 Global Organizations Declare Support for the Task Force on Climate-Related Financial Disclosures and Its Recommendations*, TCFD (Feb. 12, 2020,7:00 AM), https://assets.bbhub.io/company/sites/60/2020/02/PR-TCFD-1000-Supporters_FINAL.pdf [https://perma.cc/84YK-UU6Q] (reporting on support from corporations, governments, and financial institutions in fifty-five countries).

this writing,[235] and SASB has already also developed climate guidance that is aligned with the TCFD framework.[236] As Table 1 shows, other internationally recognized standards for reporting climate risk that are aligned with the federal materiality standards and are already widely in use among U.S. companies include the CDP[237] and CDSB,[238] both of which have endorsed and aligned with the TCFD framework.[239] International standards that are stakeholder-oriented, such as the World Economic Federation framework, which has been endorsed by leading accounting firms, will not align well with the current structure and focus of Regulation S-K, unless Congress acts to expand the definition of materiality for purposes of SEC rulemaking.[240] For these reasons, it is particularly critical that the SEC work to align climate-related reporting with the TCFD framework. Section C below explains how this can be achieved and where Congressional authorization for the SEC to do so may be necessary.

The TCFD developed its reporting framework for climate-related financial risk in 2017 to facilitate improved disclosure practice by public companies across both financial and non-financial sectors.[241] Led by the G20's Financial Stability Board, the TCFD was convened and its framework developed after a multi-year consultation with regulators and market participants from around the globe.[242] The TCFD framework is based on four disclosure categories: governance, strategy, risk management, and metrics and targets.[243] Notably, the framework is designed to apply "to all organizations, regardless of industry" and is intended to facilitate the reporting of climate-related disclosures in "an organization's financial filings" based on the relevant definition of materiality that applies to public filings in a given jurisdiction.[244] The principles that ground the TCFD framework "ask companies to provide decision-useful, forward-looking information on the financial impacts of climate-related risks and opportunities" and encourage them to "place strong focus on risks and opportunities related to the transition to a lower carbon economy."[245]

An advantage of endorsing the TCFD framework is that it also follows a tiered approach that includes general (*i.e.*, cross-industry) and industry-specific

235. CGIIPA, *supra* note 12, § 404 (establishing the TCFD standards as the applicable climate disclosure framework if the SEC is unable to issue an alternative within two years).

236. SUSTAINABILITY ACCT. STANDARDS BD., CLIMATE RISK TECH. BUL. 2021 ED. 10–13 (2021) [hereinafter CLIMATE RISK TECH. BUL.], https://www.sasb.org/wp-content/uploads/2021/05/Climate-Risk-Technical-Bulletin2021-042821.pdf [https://perma.cc/DD6Y-WF5K].

237. *Guidance and Questionnaires*, CARBON DISCLOSURE PROJECT, https://www.cdp.net/en/guidance (last visited Nov. 20, 2021) [https://perma.cc/E4G9-23L3].

238. *See generally* CDSB FRAMEWORK, *supra* note 69.

239. *See supra* note 203 and accompanying text.

240. WEF Standards, *supra* note 4.

241. *See generally* TCFD 2017 Report, *supra* note 6.

242. TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES, OVERVIEW 6 (2021), https://assets.bbhub.io/company/sites/60/2020/10/TCFD_Booklet_FNL_Digital_March-2020.pdf [https://perma.cc/5PTN-YQZP] (discussing the work of the TCFD).

243. TCFD 2017 Report, *supra* note 6, at 14 & fig.4 (providing recommended disclosures for each).

244. *See also id.*, at 5–11 10 tbl.1, 11 tbl.2 (identifying how climate-related risk may have a material financial effect).

245. *Id.*

guidance,[246] as this Article has recommended. Such guidance can help standardize risk disclosure while allowing tailoring, and as Table 1 shows, other internationally recognized climate risk disclosure frameworks, including the CDSB and CDP, have already aligned their standards to conform to the TCFD, as have governments in the U.K., New Zealand, and Japan, to name a few.[247] For these reasons, it is particularly critical that the SEC work to align climate-related reporting with the TCFD framework. Section C below explains how this can be achieved and where Congressional authorization for the SEC to do so may be necessary.

If the SEC decides to allow or require companies to use independent standards or frameworks as the basis of ESG materiality assessments, it must also consider how best to ensure their authority, integrity, and compatibility with the federal framework. Congress could decide to place a private standard setter or a newly created standard-setting body under the same oversight of the SEC and the Public Company Accounting Oversight Board (PCAOB) that currently applies to FASB, although again the merger of the Value Reporting Foundation into the ISSB in 2021 may make this option less viable.[248] Alternatively, the SEC (or Congress) should adopt criteria that existing frameworks must meet in order to be used as the basis of ESG reporting. Public regulation of private regulation—that is, "meta-regulation"—is a widely used regulatory strategy, and indeed, one that the SEC also used when it endorsed the COSO standards for internal controls.[249] These criteria should at minimum ensure that information reported under the framework is intended for investors and that the framework is internationally recognized.

All of these efforts would better harmonize the work of the SEC with that of the newly established ISSB and its proposed global climate and ESG disclosure standards,[250] an effort that has already been endorsed by IOSCO.[251] Ensuring that any ESG disclosure obligations for registrants align with emerging

246. TCFD 2017 Report, *supra* note 6.

247. *See generally* TCFD Annex, *supra* note 191; CARBON DISCLOSURE PROJECT, GLOB. REPORTING INITIATIVE, CLIMATE DISCLOSURE STANDARDS BD., INT'L INTEGRATED REPORTING COUNCIL & SUSTAINABILITY ACCT. STANDARDS BD., REPORTING ON ENTERPRISE VALUE: ILLUSTRATED WITH A PROTOTYPE CLIMATE-RELATED FINANCIAL DISCLOSURE STANDARD (2020), https://29kjwb3armds2g3gi4lq2sx1-wpengine.netdna-ssl.com/wp-content/uploads/Reporting-on-enterprise-value_climate-prototype_Dec20.pdf [https://perma.cc/ZJN7-7Z5R]. Thus far, specific guidance has been developed for the following sectors: (i) financial, (ii) energy, (iii) transportation, (iii) materials and building, and (iv) agriculture, food, and forestry products. On international adoption, see CLIMATE RISK TECH. BULL., *supra* note 236, at 6.

248. Sarbanes-Oxley Act of 2002, Pub. L. No. 107-204, 116 Stat. 745 (codified throughout sections 11, 15, 18, 28, and 29 U.S.C.A. (2003)) and its implementing rules provide that the SEC may recognize standards developed by the FASB or other standard-setting bodies that meet the statutory requirements set forth in 15 U.S.C. § 77s(b)(1) (2002).

249. On meta-regulation, see CHRISTINE PARKER, THE OPEN CORPORATION: EFFECTIVE SELF-REGULATION AND DEMOCRACY 245–91 (2002).

250. IFRS Foundation, *supra* note 8.

251. *IOSCO Responds to IFRS Consultation on Sustainability Reporting*, INT'L ORG. SEC. COMM'NS (Dec. 23, 2020), https://www.iosco.org/news/pdf/IOSCONEWS589.pdf [https://perma.cc/3FUL-V5YY] (confirming IOSCO's support for the International Sustainability Standards Board); *see also IOSCO Steps Up Its Efforts to Address Issues Around Sustainability and Climate Change*, INT'L ORG. OF SEC. COMM'NS (Apr. 14, 2020), https://www.iosco.org/news/pdf/IOSCONEWS564.pdf [https://perma.cc/2RJQ-TVR6] (reporting IOSCO's formation of a Task Force on Sustainable Finance).

international standards to the extent possible will reduce compliance costs for issuers and encourage foreign firms to pursue U.S. listings. Accordingly, the SEC should make every effort to encourage ongoing alignment among international frameworks and standard setters through its approach to ESG disclosure reform, regardless of whether it ultimately adopts the global standard or not.

5. *Balancing Comparability & Flexibility*

As noted above and as the SEC itself has observed, a fundamental requirement of any disclosure modernization effort is that it must achieve both comparability and flexibility.[252] How this question is answered will also determine the scope and quality of the ESG information that may be reported under any proposed reforms. Given the need to balance these two imperatives, this Article recommends a mixed approach that relies on both prescriptive rules and principles-based disclosure, an approach the SEC has historically adopted.[253] Table 2 compares prescriptive and principles-based disclosure across several dimensions. Prescriptive disclosures are specific mandatory rules that apply to all companies, offering consistency and comparability. To avoid eliciting immaterial information, however, they should be adopted only with respect to matters that are expected to be material for all companies; prescriptive disclosures may also require more frequent updating.[254] Principles-based disclosure, in contrast, establishes general parameters for disclosure, giving reporting companies considerable flexibility with regard to whether and how to report information. For example, the SEC's 2020 revision to the narrative description of the business in Item 101 of Regulation S-K directs companies to provide information on the company's human capital resources, "[t]o the extent material to an understanding of the registrant's business taken as a whole."[255] Other examples include the narrative discussion in Management's Discussion and Analysis and Rule 105's risk factor disclosures.[256] Principles-based disclosure may reduce compliance costs by giving issuers greater flexibility to *not* disclose, but it sacrifices comparability and may lead to under-reporting.[257] Section C below identifies which recommended disclosure reforms should be prescriptive and which should be principles-based.

252. Regulation S-K Concept Release, *supra* note 15, at 23924–31.
253. Regulation S-K Study, *supra* note 34, at 98.
254. Regulation S-K Concept Release, *supra* note 15, at 23925–27.
255. 2020 Final Rules, *supra* note 42, at 63733.
256. 17 C.F.R. § 229.105 (2020); 17 C.F.R. § 229.303 (2020).
257. Regulation S-K Concept Release, *supra* note 15, at 23925–27.

TABLE 2: DISCLOSURE GOALS & APPROACHES

Goals	Enhanced Comparability	Enhanced Flexibility
Disclosure Approach	Prescriptive	Principles-based
Examples	Line-item rules; Qualitative & quantitative indicators	Standards; Materiality qualifiers
Advantages	More informative	Less informative
Limitations	One-size-fits-all Overdisclosure	Boilerplate Underdisclosure
Cost Implications	Potential investor cost-savings Potential issuer compliance cost increase	Potential issuer compliance cost-savings Potential investor cost increase (direct engagement, ESG research)
Enforcement Implications	Increased enforcement risk to issuers	Lower enforcement risk to issuers
Regulatory Implications	May become obsolete more quickly	May more readily apply to changing circumstances

The clear demand for firm-specific disclosures, less boilerplate, and standardization of ESG reporting across capital markets, all weigh in favor of a more prescriptive approach within a mixed model.[258] And in fact, the SEC has at its disposal familiar tools that combine the best of both approaches, improving consistency and comparability while preserving flexibility. This kind of mixed approach will be less costly to comply with, more stable over time, and more effective at eliciting firm-specific information for investors. This balance is also favored in the public comments the SEC has solicited on this issue.[259]

Requiring the use of key performance indicators (KPIs) and other quantitative measures wherever possible is a key component of the mixed approach to disclosure described in Part C and another important way to promote comparability. Although the SEC has rarely mandated particular quantitative indicators outside the financial statements,[260] most voluntary ESG frameworks strongly encourage them.[261] A more flexible approach that the SEC has already used in the MD&A and in its 2020 rule on human capital disclosure is to encourage the use of KPIs, but to allow issuers to select the particular indicators that they use, so long as they disclose them.[262] This is a particularly useful strategy for climate risk and other ESG information where data availability is rapidly evolving.

258. As the Institute of International Finance (IIF) has noted, the goal of any prescriptive approach to ESG disclosure is not "maximum harmonizing." IIF, *supra* note 73, at 18.

259. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 93–96, 143 tbl.5.

260. Notable exceptions are the required quantitative market risk disclosures under Item 305, 17 C.F.R. § 229.305 (2020).

261. This is true for all of the leading frameworks included *supra* Table 1.

262. *See* 2020 Final Rules, *supra* note 42, at 63737–38; Commission Guidance on Management's Discussion and Analysis of Financial Condition and Results of Operations, 85 Fed. Reg. 10568–69 (Feb. 25, 2020) [hereinafter MD&A Guidance] (to be codified at 17 C.F.R. Parts 211, 231, and 241).

Therefore, to the extent possible, the SEC should continue to require companies to disclose the KPIs or other metrics they use in assessing ESG materiality and measuring ESG risk but should only require prescriptive indicators if they are already in widespread use or if they are already widely accepted in the United States or internationally for a given industry.

In addition, as Part C indicates, this Article recommends that a number of the "second-tier" disclosure rules described in Table 3 be adopted on a comply-or-explain (or "report-or-explain") basis in order to promote consistent, yet flexible corporate reporting where greater variation in corporate practice is expected. Under this approach, which is widely used internationally in corporate governance codes and disclosure frameworks,[263] the regulator adopts a rule or standard that reflects corporate best practices, and companies can elect to comply either by implementing the practice directly or by providing an explanation for why they do not. Under a "comply-or-explain" regime, only a firm that both fails to comply with the stated best practice *and* fails to provide an adequate explanation would be noncompliant.[264] The approach has already been used in Items 407 and 408 of Regulation S-K.[265] The National Association of Insurance Commissioners' climate-risk disclosure survey, which is required of insurers in six states, also requires various disclosures on climate-risk identification, risk-management policies, mitigation, and scenario testing on a "report-or-explain" basis.[266]

Because these approaches are principles-based, self-regulatory, and market-driven,[267] they are well-suited to disclosure of environmental and workforce-related issues whose materiality varies among industries, where fewer firms are already providing disclosures, and where firms' ability to quantify and assess risk is likely to improve over time. As I have noted in prior work, the flexibility of such rules may also make them less subject to constitutional challenge on compelled speech grounds and more likely to survive cost-benefit scrutiny, all of which may enable them to be implemented more rapidly.[268]

However, comply-or-explain approaches should not be used for disclosures that should apply to all reporting companies and that are intended to promote comparability. Evidence from the U.K. and other jurisdictions suggests that comply-or-explain rules successfully encourage adoption of the baseline best

263. *See generally* REPORT OF THE COMMITTEE ON THE FINANCIAL ASPECTS OF CORPORATE GOVERNANCE (1992), http://www.ecgi.org/codes/documents/cadbury.pdf [https://perma.cc/54S4-XPHE]. This model has since been incorporated in the U.K. Companies Act. *See* Companies Act 2006, c. 46, § 13 (UK), https://www.law.du.edu/images/uploads/corporate-governance/legislation-companies-act.pdf [https://perma.cc/3UTD-AFX4]. For a survey of its use in various jurisdictions, see generally Harper Ho, *Comply or Explain*, *supra* note 214.

264. *See* Harper Ho, *Comply or Explain*, *supra* note 214, at 321.

265. On Item 407 & Item 408, see discussion *infra* Section III.B.5. It also appears to be supported by some SEC Commissioners as an approach to ESG disclosure reform.

266. NAT'L ASSOC. OF INS. COMM'RS (NAIC), CLIMATE RISK DISCLOSURE SURVEY GUIDANCE 1 (2020), http://www.insurance.ca.gov/0250-insurers/0300-insurers/0100-applications/ClimateSurvey/upload/QUESTIONS-AND-GUIDELINES-CLIMATE-RISK-SURVEY-REPORTING-YEAR-2020.pdf [https://perma.cc/JN2Y-CUEH].

267. Abma Rients & Mieke Olaerts, *Is the Comply or Explain Principle a Suitable Mechanism for Corporate Governance Throughout the EU?: The Dutch Experience*, 9 EUR. CO. L. 286, 287–88 (2012) (summarizing potential drawbacks of the comply or explain rule).

268. Harper Ho, *Comply or Explain*, *supra* note 214, at 343–44, 346–47.

practice, but that the informational content of explanations is often inadequate.[269] In addition, investors may have difficult monitoring and enforcing comply-or-explain disclosures precisely because of their flexibility.[270] And of course, comply-or-explain rules permit deviations from a given corporate governance or reporting practice. For all of these reasons, they will ultimately be less effective than line-item rules in promoting the comparability of reported information, and in the case of climate-related disclosures, greater transparency and consistency is needed quickly.

6. *The Question of Scaling, Exemptions, and Phasing: Considering the "Who" of Disclosure.*

A final threshold question is whether all public companies should be required to comply with new ESG disclosure rules or whether instead emerging growth companies (EGCs) or smaller reporting companies (SRCs) should be exempted or subject to scaled-backed requirements if the SEC introduces enhanced ESG disclosure rules.[271] Under both the JOBS Act and the FAST Act, Congress directed the SEC to "scale or eliminate" reporting rules in a manner that reduces the costs and burdens on EGCs and SRCs, and to eliminate unnecessary or redundant provisions, while still providing material information to investors.[272] Similarly, reporting requirements introduced in the European Union, the United Kingdom, and other jurisdictions have generally applied in the early stages only to the largest companies, which can more easily bear the costs of complying with disclosure mandates and are more likely to have already voluntarily adopted disclosure best practices.[273] Many of these regulations are also intended to change corporate behavior, and so imposing higher transparency expectations on the firms with the greatest impact on stakeholders is a more efficient way to achieve these goals.[274]

The SEC itself, however, has noted that "[t]he benefits of disclosure may be greater for smaller registrants because information asymmetries between investors and managers of smaller companies are typically higher than for larger,

269. Harper Ho, *Comply or Explain, supra* note 214, at 331–34; *see, e.g.*, Sridhar Arcot, Valentina Bruno & Antoine Faure-Grimaud, *Corporate Governance in the U.K.: Is the Comply or Explain Approach Working?*, 30 INT'L REV. L. ECON. 193, 195–99 (2009) (finding increased corporate governance code compliance but largely boilerplate explanations for non-compliance).

270. *See generally* Andrew Keay, *Comply or Explain in Corporate Governance Codes: In Need of Greater Regulatory Oversight?,* 34 LEG. STUD. 279 (2014).

271. EGCs are defined in Section 2(a)(19) of the Securities Act of 1933, *codified at* 15 U.S.C. 77b(a)(19) and Section 3(a)(80) of the Exchange Act, *codified at* 15 U.S.C. §§ 78(c)(a)(80) as a company with total annual gross revenues of less than $1 billion in the most recent fiscal year. SRCs are defined in Item 10(f) of Regulation S-K. 17 C.F.R. § 229.10(f)(1) (2020). The SEC's 2013 comprehensive review of Regulation S-K identifies where EGCs and SRCs are exempted from particular rules or are subject to scaled requirements under Regulation S-K. *See generally* Regulation S-K Study, *supra* note 34.

272. FAST Act, *supra* note 1, at 129 Stat. 1784; JOBS Act, *supra* note 1, at 126 Stat. 313; *see also* Regulation S-K Concept Release, *supra* note 15, at 23921 (citing this authority).

273. For example, the E.U.'s 2014 Non-Financial Reporting Directive applied before its amendment to corporate groups with more than 500 employees. *See* EU NFR Directive *supra* note 198, at 4.

274. *See, e.g.*, *id.*, at Preamble.

more seasoned companies with a large following."[275] For similar reasons, the EU's 2021 revision to its nonfinancial reporting now includes smaller firms.[276] Public comments to the Regulation S-K Concept Release strongly opposed scaling or exempting these registrants from any enhanced ESG disclosures for these same reasons, and because smaller public companies are less likely to have policies and procedures for managing ESG risks.[277]

This Article therefore recommends that any new ESG disclosure rules adopted by the SEC apply to all registrants, but that their implementation be phased in over a three-year period for EGCs and SRCs. This approach advances the goals of improving ESG transparency from those companies where ESG information asymmetries are the greatest, while lessening the initial compliance burden on these firms.[278] In addition to allowing an extended phase-in period, the SEC could require such firms to report on a comply-or-explain basis during the phase-in period on measures that would otherwise be mandatory for all firms. This approach would facilitate a smoother transition to full reporting.

C. Implementing ESG Disclosure: Next Steps

Building on the above principles, the following discussion presents specific recommendations for amendments to Regulation S-K with respect to three core categories of ESG information that are material across firms: (i) climate risk; (ii) corporate governance; and (iii) human capital. In general, this Article supports the use of line-item disclosures. It advocates the use of more flexible options, however, such as reporting on a comply-or-explain basis or other principles-based approaches where the SEC determines that the value of clarity and a level playing field across issuers is offset by the need for more firm-specific responses. This Article leaves to the SEC the determination of whether the recommended disclosures should also be incorporated into the proxy disclosure rules, and whether they should also be extended to investment companies and other regulated entities under the SEC's oversight.[279]

Table 3 summarizes the proposed recommendations, together with the recommended disclosure approach. They are organized below from most prescriptive to least prescriptive and in some cases include alternatives to the recommended approach. Table 3 also indicates if the recommendation would require a new rule or the amendment of an existing rule. Following a general discussion

275. Regulation S-K Concept Release, *supra* note 15, at 23897.

276. CSRD, *supra* note 7.

277. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 125 (finding that 75% of all respondents on this question opposed scaling or exemption).

278. This approach was also supported by investor comments to the Regulation S-K Concept Release. *Id.* at 125 n.296 (citing relevant comments).

279. Rule 14A is codified at 15 U.S.C. § 78n (2018) (detailing the content of proxy disclosures). For example, ESG reporting requirements related to investment products, proxy voting, fiduciary duties, and, in the future, investor stewardship requirements are all potential areas of regulation that may apply to entities regulated under the Investment Company Act of 1940, 15 U.S.C. §§ 80a-1 *et seq.* (2018), and the Investment Advisers Act of 1940, §§ 80b-1 *et seq.* (2018).

of the recommended reforms in each of these three areas, this Part explains how to implement them in particular provisions of Regulation S-K.

TABLE 3: RECOMMENDED CORE ESG REFORMS

ESG Dimension	*Relevant Reporting Rules*	*Recommended Form of Disclosure*			
		Prescriptive Mandate	*Comply or Explain/ Report or Explain*	*Other Principles-based*	*Guidance*
Governance					
ESG risk oversight	Reg S-K Item 105		ESG risk mitigation		
	Reg S-K Item 407(h) (board diversity; risk oversight)	Narrative discussion of board oversight of ESG risks (TCFD RD)*	ESG risk mitigation		
Executive compensation & ESG risk	Reg S-K Item 402	Indicate whether climate risk mitigation is integrated with compensation benchmarks (TCFD RD)*	Effect of executive compensation on climate risk mitigation (TCFD RD)	Effect of executive compensation on ESG risk mitigation generally	
	Reg S-K Item 402	Integrate ESG risks into the Compensation Disclosure & Analysis of risk-related executive compensation practices; narrative pay ratio disclosure			
ESG risk management & strategy	Reg S-K Item 407(h) (board diversity; risk oversight)	Narrative discussion of management's role in assessing and managing environmental, human capital, and climate risks (TCFD RD)*	ESG integration into risk management		

ESG Dimension	*Relevant Reporting Rules*	*Recommended Form of Disclosure*			
		Prescriptive Mandate	*Comply or Explain/ Report or Explain*	*Other Principles-based*	*Guidance*
	Reg S-K Item 307 (disclosure controls)	ESG reporting subject to disclosure controls and procedures & narrative discussion of process for identifying ESG risks (TCFD RD)			
	New disclosure rule	Implementation of SASB-based sector-specific reporting			
	Reg. S-K Item 303 (MD&A)	Impact of material environmental, human capital, and climate-related trends and uncertainties (TCFD RD); metrics used for their assessment (TCFD RD)		Impact of climate-related scenario on resilience (TCFD RD)	Alternative: Encourage disclosure on the basis of SASB-based industry reporting standards or with reference to specified examples of ESG risks identified by the SEC that are likely to be material for many registrants.
Social					
human capital	Reg. S-K, Item 101 (description of business)	Item 101 disclosures made with reference to SASB industry-specific materiality standards			
	Reg. S-K, Item 105 (risk factors)	Identification of risk factors with reference to SASB industry-specific materiality standards			
Environmental					
climate risk strategy	Reg. S-K, Item 105 (risk factors)	Identification and assessment of climate risks over short, medium, and long-term (TCFD RD)	Extent of third-party assurance; SASB-based sector-specific reporting on climate risk	Describe targets used to manage climate-related risks, and performance against targets (TCFD RD)	

ESG Dimension	*Relevant Reporting Rules*	*Recommended Form of Disclosure*			
		Prescriptive Mandate	*Comply or Explain/ Report or Explain*	*Other Principles-based*	*Guidance*
	Reg S-K Item 407(h)	TCFD-compliant governance disclosures (see above)	Alternative: use of the TCFD or other internationally accepted climate risk disclosure frameworks		
		Scope 1 GHG emissions (TCFD RD)	Climate risk management & mitigation efforts (TCFD RD), alignment with national GHG reduction goals; Scope 2 & 3 GHG emissions (TCFD RD)		Encourage best practices; assessment and mitigation of climate impacts
			Scenario analysis parameters, if any (TCFD RD)	Results of scenario analysis (TCFD RD)	Encourage best practices; recommend or require specific parameters
	Reg S-K Item 402(s)		Extent to which climate risk mitigation is integrated with executive compensation benchmarks		
other environmental risk	Reg. S-K, Item 105 (risk factors)		Extent of third-party assurance; SASB-based sector-specific reporting on environmental risk		
	Reg S-K Item 402(s)		Extent to which risk mitigation is integrated with executive compensation benchmarks		Encourage best practices; recommend or require specific parameters
	Reg S-K Item 407(h)				Encourage best practices; assessment and

ESG Dimension	*Relevant Reporting Rules*	*Recommended Form of Disclosure*			
		Prescriptive Mandate	*Comply or Explain/ Report or Explain*	*Other Principles-based*	*Guidance*
					risk mitigation

1. Climate-Related Financial Risk.

In light of the systemic and market-wide risk effects associated with climate change, corporate climate impacts, and climate risk disclosure practices, all companies should be required to produce basic climate-related risk disclosures, as well as material environmental information that is related to climate change risk, with additional disclosures applying on a sector-specific basis. No reporting requirements under the federal securities laws specifically reference climate-related risk, and the SEC last issued reporting guidance on climate risk in 2010.[280] The SEC also has the authority to require the disclosure of other environmental risks to the company or external environmental impacts that are material to investors, but such disclosure rules may be most easily adopted with specific congressional authorization and so are considered in Part IV.

The SEC affirmed in its 2010 climate guidance that Regulation S-K may already require companies to disclose material climate-related financial risks,[281] but this guidance has not elicited adequate climate risk disclosure by reporting companies in the view of investors,[282] and it has failed to move companies toward adequate and comparable disclosure approaches.[283] In addition to its nonbinding nature, another limitation of the 2010 guidance is that it only focuses on legal, regulatory, and physical risk, but fails to address the risks associated with the transition to a post-carbon economy (*i.e.*, "transition risk").[284] More critically, the 2010 guidance only directs companies to assess materiality risk from the standpoint of the reporting company, without reference to the reporting company's external climate risk impacts or its contribution to systemic risk.[285] And of course, the securities laws do not require that all material information be

280. *See* 2010 Climate Guidance, *supra* note 25, at 3.
281. *Id.* at 15.
282. *See* Harper Ho, *Disclosure Overload?*, *supra* note 49, at 121 (analyzing Regulation S-K Concept Release responses on this question).
283. *See* sources cited *supra* note 93 and accompanying text.
284. For a definition of these risks, see FSB CLIMATE DATA REPORT, *supra* note 122, at 5–10; *see also* CLIMATE RISK TECH. BULL., *supra* note 236, at 10–13.
285. *See, e.g.*, 2010 Climate Guidance, *supra* note 25, at 17.

disclosed,[286] so in the absence of prescriptive mandates, most companies have simply not reported climate-related financial risk.[287]

As discussed above, this Article takes the position that the SEC should not develop its own reporting framework for climate-related risk, but instead should endorse the TCFD framework and integrate the TCFD requirements into Regulation S-K.[288] In addition, the SEC should mandate disclosure of material environmental and climate-related risks in accordance with SASB's materiality guidance, which again is based on the same definition of materiality that applies to public filings in the United States.[289] SASB has already developed its own climate guidance that aligns with the TCFD recommendations,[290] and both the TCFD framework and the SASB standards are widely accepted internationally and by reporting companies and investors.[291]

In fact, there is already broad agreement among institutional investors, including the SEC's own Investor Advisory Committee, that implementing the TCFD framework is the most cost-effective and appropriate approach, given the deepening global convergence around the TCFD framework from IOSCO, other governments, stock exchanges, institutional investors, and many public companies.[292] The International Sustainability Standards Board's global reporting framework, which begins from a "climate first" priority, also builds on the TCFD framework. But prior research has not yet addressed how to integrate the TCFD's recommendations into the U.S. regulatory context.

One way to implement TCFD-aligned disclosures directly would be for the SEC to follow the United Kingdom's approach and require all companies to disclose climate-related risks in accordance with the TCFD framework, or explain why they do not.[293] If it followed the U.K. model, the SEC could create a separate disclosure form or rule under Regulation S-K for this purpose, perhaps as a subsection to Item 105 risk factor disclosures. This information could then be cross-referenced within other risk disclosures, such as Item 303 (MD&A),[294] in order to avoid duplication. But without any clear obligation on corporations to account

286. *Supra* notes 90–92 and accompanying text.

287. *See* TCFD 2020 Status Report, *supra* note 113, at 4 (observing an increase in the number of reporting companies and in disclosure quality, but that reporting on financial impacts is still low).

288. *See generally* TCFD 2020 Status Report, *supra* note 113.

289. *See* SUSTAINABILITY ACCT. STANDARDS BD., SASB MATERIALITY MAP (2018), https://materiality.sasb.org/materiality.html [https://perma.cc/BM5L-N4YU].

290. *See* CLIMATE RISK TECH. BULL., *supra* note 236, at 4.

291. Value Reporting Found., *supra* note 228

292. TCFD 2020 Status Report, *supra* note 113, at 4 (reporting strong support worldwide, including nearly 60% of the world's 100 largest public companies). The proposed Corporate Governance Improvement and Investor Protection Act would introduce some of these elements and could serve as a useful model for adoption of the TCFD framework in the U.S. CGIIPA, *supra* note 12 (introducing disclosure requirements for physical and transition risks, their financial impact, the implications for corporate governance and strategy, the use of standardized disclosure metrics, and mitigation over time).

293. The United Kingdom already mandates greenhouse gas (GHG) disclosures, and as of 2021, requires reporting based on the TCFD guidelines for all premium listed companies on a comply-or-explain basis. *Climate-Related Reporting Requirements*, FIN. CONDUCT AUTH. (June 24, 2021), https://www.fca.org.uk/firms/climate-change-sustainable-finance/reporting-requirements [https://perma.cc/3TUY-X8LZ].

294. *See* 17 C.F.R. § 229.303 (2020).

for climate-related financial risk, not to mention systemic risk effects and corporate externalities like GHG emissions, a principles-based comply-or-explain approach is unlikely to provide the information markets need to accurately price climate risk and that investors and regulators need to evaluate even the economic risks associated with climate change.

This Article therefore recommends that the TCFD recommendations be incorporated directly into Regulation S-K, as shown in Table 3. For example, to harmonize Regulation S-K with the TCFD framework, the SEC would need to amend Item 105 (risk factor disclosures)[295] to require line-item reporting of climate-related risks and opportunities. The SEC could then provide instructions requiring companies to consult the related TCFD guidance for their sector.[296] TCFD recommended disclosures also include corporate governance disclosures on the role of the board and management and on the processes the company uses to assess climate risk materiality.[297] If these are extended to apply to all material risks, the rules should specifically reference risk oversight and risk management of climate, environmental, and human capital-related risk. If adopted as proposed here, the TCFD disclosures on risk identification and risk management could also help elicit disclosure of material information about private environmental governance regimes that increasingly guide corporate environmental and climate risk assessment and mitigation practice.[298]

This Section explains below how Regulation S-K should be amended to implement the TCFD recommendations. Where new reporting requirements would be necessary, these are shown on Table 4 with an asterisk (*); otherwise, the relevant provision of Regulation S-K is shown. These include rules requiring reporting on the results of scenario analysis based on warming scenarios or climate risk events identified by the SEC, the parameters for self-specified scenario analysis, information on how the company manages climate risk and integrates it into risk management, and disclosure of GHG emissions and climate-related performance targets.[299] Although these disclosures fall within the SEC's current regulatory authority, the SEC may prefer to adopt such requirements on a comply-or-explain basis or to simply encourage conformity to the TCFD framework in its updated climate risk guidance.[300] Although both approaches are likely to

295. 17 C.F.R. § 229.105 (2020).

296. For example, the instructions to Item 101 (description of the business) identify factors companies should consider in assessing the materiality of segment-specific information, although these factors are not included in the text of the rule itself. 17 C.F.R. § 229.101 (2020).

297. *See* TCFD 2017 Report, *supra* note 6, at 13.

298. The first and third of these are also TCFD recommendations. *Id.* at 18–25. *See generally* Vandenbergh, *supra* note 61 (recommending mandatory disclosure of this information).

299. *See generally* TASK FORCE ON CLIMATE-RELATED FIN. DISCLOSURES (TCFD), TECHNICAL SUPPLEMENT: THE USE OF SCENARIO ANALYSIS IN DISCLOSURE OF CLIMATE-RELATED RISKS AND OPPORTUNITIES (2017), https://assets.bbhub.io/company/sites/60/2021/03/FINAL-TCFD-Technical-Supplement-062917.pdf [https://perma.cc/3BXQ-C7WN].

300. The SEC's 2018 cybersecurity guidance offers supporting precedent for disclosure related to Scope 3 Emissions, which are those of third-party suppliers and other business partners. *See* 2018 Cybersecurity Guidance, *supra* note 77, at 8169 (urging voluntarily disclosure of cybersecurity risk factors, "including . . . third party supplier and service provider risks.").

be less effective for the reasons previously explained, flexibility may be useful in areas like these where data and reporting practices are rapidly evolving.

This Article, however, recommends that climate-related disclosure practices that have been widely incorporated into international frameworks but that have not yet been consistently adopted by public companies be introduced on a comply-or-explain basis or through a more flexible principles-based approach, as indicated in Table 2. One of these, reporting on the impact of a two-degree warming scenario, is a TCFD recommended disclosure; the same could be done for a menu of baseline scenarios specified by the SEC.[301] Others are: (i) disclosing whether climate-related financial risk information is subject to third-party assurance; (ii) whether the company follows SASB-based sector-specific reporting for environmental and climate risk; and (iii) whether climate risk mitigation efforts are aligned with national GHG reduction goals.[302] Such disclosures are necessary to standardize climate risk reporting, but will be more costly and require greater adaptation in corporate practice.[303]

Similarly, it will take time for corporate reporting on climate mitigation efforts and disclosures of performance against specific targets to develop. Therefore, these could also be introduced with more principles-based approaches; general indicators, such as Scope 2 and Scope 3 GHG emissions or the parameters the company uses in its scenario analysis, could be required on a comply-or-explain basis.[304] At a minimum, such disclosures should be encouraged in updated climate risk guidance.

301. The CFTC recommends that regulators establish a common scenario menu but also encourage tailored analysis. *See* CFTC, *supra* note 74, at 73–77, 82, 88.

302. *See supra* Table 2.

303. For a discussion of recommendations related to risk mitigation disclosures, see *infra* Section III.C.5.a.

304. Prescriptive disclosures may be optimal in all of these areas, but this Part assumes that they would require a Congressional mandate.

TABLE 4: TCFD RECOMMENDED DISCLOSURES (RD) & REGULATION S-K[305]

TCFD	*Alignment with Regulation S-K*
Governance	
RD1 Board oversight	Reg. S-K, Item 407
RD2 Management's role	Reg. S-K, Item 407
Strategy	
RD1 Identify climate risks and opportunities	Reg. S-K, Item 105
RD2 Impact of climate-related risks and opportunities on issuer	Reg. S-K, Item 303 MD&A
RD3 Impact of climate-related scenario, incl. 2°C scenario, on resilience	*
Risk Management	
RD1 Identify and assess climate risks	Reg. S-K, Item 105
RD2 Manage climate risks	*
RD3 Integration of climate risks into risk management	*
Metrics and Targets	
RD1 Metrics used to assess climate risks and opportunities	Encouraged in MD&A generally (Item 303)[306]
RD2 Disclose Scope 1, Scope 2, and Scope 3 GHG emissions and related risks	*
RD3 Targets for climate-related risks & opportunities & performance targets	*

2. *Corporate Governance*

Because corporate governance is critical to all companies, ESG governance disclosures should apply to all firms, building upon current reporting requirements on risk oversight and risk management. The primary provisions of Regulation S-K addressing these issues are Item 303 (MD&A), Item 402 (executive compensation), and Item 407(h) (corporate governance).[307] These should be revised, as described below, to require all firms to discuss (i) the role of the board and of management in environmental, climate-related, and human capital-related risk oversight and risk management, (ii) the processes the company uses to assess the materiality of these factors, (iii) whether ESG information reported in the public filings is subject to disclosure controls and procedures, and (iv) whether or not these factors and processes are integrated into risk management systems. Such rules already enjoy broad support from institutional investors.[308] They are also necessary if the SEC intends to mandate compliance with the TCFD framework for climate-related financial risk, since Regulation S-K's corporate governance and risk disclosures rules do not specifically require climate-related risk disclosure at present.

305. TCFD 2017 Report, *supra* note 6, at 19–23 (introducing the core recommendations).

306. MD&A Guidance, *supra* note 262.

307. 17 C.F.R. §§ 229.303, 402, 407(h) (2021).

308. CERES, DISCLOSE WHAT MATTERS, *supra* note 66, at 4–5 (summarizing the results of institutional investor surveys prior to 2018); *see also* TCFD 2017 Report, *supra* note 6, at v, 14–23 (identifying corporate governance as a core aspect of climate-related financial risk management and mitigation).

In addition, the SEC should require companies to report on a comply-or-explain basis, (i) material industry-specific governance measures identified by SASB; and (ii) whether the company has taken steps to mitigate climate-related risk. Comply-or-explain disclosure is recommended because it is the basis for applying the SASB standards[309] and because climate risk mitigation is not yet widely practiced or reported by most firms. As discussed in the detailed Regulation S-K recommendations below, these disclosures align with emerging international frameworks, promote firm-specific disclosure, and would improve disclosure comparability.

3. Human Capital

The SEC's 2020 human capital disclosure amendments to Regulation S-K are a critical first step toward improving the consistency of workforce-related information that is material across all reporting companies.[310] The amendments require registrants to describe the company's "human capital resources" and "any human capital measures or objectives that the registrant focuses on in managing the business," where such matters are "material to an understanding of the business."[311] Some SEC commissioners have in the past supported prescriptive disclosures for broadly applicable matters such as the percentage of part-time workers, workforce expenses, turnover, and workforce diversity;[312] however, the SEC expressly rejected prescriptive disclosures that had been recommended in the public comments and earlier rulemaking petitions and instead adopted a principles-based approach.[313] Early responses to the new rules suggest that human capital disclosures in public filings have increased, but that the materiality caveat in the new rule has left companies uncertain regarding the intended scope of disclosure and so has reduced comparability.[314] At the same time, the SEC's requirement that particular measures be disclosed may allow the SEC to identify material measures or targets that could inform more prescriptive amendments in the future.

309. *Understanding SASB Standards*, SUSTAINABILITY ACCT. STANDARDS BD., https://www.sasb.org/implementation-primer/understanding-sasb-standards/ (last visited Nov. 19, 2021) [https://perma.cc/9QB8-MLZQ].

310. 17 C.F.R. § 229.101(c)(2)(ii) (2020).

311. Depending on the nature of the registrant's business and workforce, this information might "address the development, attraction and retention of personnel." §§ 229.101(c)(1) & (c)(2)(ii).

312. Allison Herren Lee, *Regulation S-K and ESG Disclosures: An Unsustainable Silence*, U.S. SEC. & EXCH. COMM'N (Aug. 26, 2020), https://www.sec.gov/news/public-statement/lee-regulation-s-k-2020-08-26 [https://perma.cc/Q4AW-HDFM].

313. 2020 Final Rules, *supra* note 42, at 63739.

314. According to a 2019 survey of U.S. corporate directors, nearly half do not believe their external reporting on human capital is adequate. *See How the Governance of Human Capital and Talent Is Shifting: Key Findings from a Survey of Public Company Directors*, ERNST & YOUNG (Oct. 28, 2020), https://www.ey.com/en_us/board-matters/how-the-governance-of-human-capital-and-talent-is-shifting [https://perma.cc/L2J6-9XP8] (reporting the results of a survey of 378 public company directors, 30% of whom reported that they need to better integrate human capital management into strategy and risk assessments).

At the time of this writing, the SEC has announced its intent to amend the 2020 rule.[315] If it does so, it should consider moving toward a more prescriptive approach over time. First, it should remove the materiality qualifier, since all disclosures are already implicitly limited to material information.[316] In addition, the SEC should require companies to disclose the material human capital indicators identified in the SASB standards for their industry or to explain why they do not. Although the SEC rejected this approach in its 2020 amendments,[317] the SASB standards offer a flexible and principles-based approach that can better generate comparable, firm-specific human capital disclosure from all reporting companies.

4. Implementing Core Disclosure Recommendations in Regulation S-K.

Despite the many elements of the current reporting framework that already address corporate governance, risk factors, and human capital, implementing the recommendations in these three core areas will nonetheless require further amendment of Regulation S-K. The following discussion identifies where such amendments could be made within existing provisions of Regulation S-K and related proxy disclosure rules, many of which have previously been identified by the SEC as covering material ESG information:[318] These include: Item 101 (general description of the business); Item 105 (risk factors); Item 303 (management's discussion and analysis); Item 307 (disclosure controls and procedures); Item 402 (executive compensation); and Item 407 (corporate governance).[319]

Other provisions also potentially elicit material ESG risk disclosures, but are adequate in their current form: Item 103 disclosures of material legal proceedings, which was amended in 2020,[320] Item 104 mine safety disclosures,[321] quantitative and qualitative disclosures about market risk under Item 305,[322] and Item 308 disclosure concerning internal financial controls.[323] Again, as noted in the introduction, the proposals here do not extend to accounting standards or financial reporting requirements under Regulation S-X, although climate risk and other material ESG factors may also affect the financial statements and reporting

315. SEC Regulatory Agenda, *supra* note 20.

316. This proposal was made by many commentators. *See* 2020 Final Rules, *supra* note 42, at 63738 & n.132 (citing such comments).

317. *See id.*, at 63738–39, 63738 n.140.

318. *See* Regulation S-K Study, *supra* note 34, at 1–4; 2010 Climate Guidance, *supra* note 25.

319. *See* 17 C.F.R. §§ 229.303, 307, 402, 407 (2021).

320. Item 103 requires disclosure of "material pending legal proceedings," and therefore captures certain material legal risks arising from ESG practices. 17 C.F.R. § 229.103 (2020). In 2020, Item 103 was amended to raise the quantitative threshold for disclosure of proceedings for damages to which the government is party to $300,000. 2020 Final Rules, *supra* note 42, at 63741–42.

321. 17 C.F.R. § 229.104 (2012).

322. § 229.305 (1997) (requiring information about market risk sensitive instruments). Public comments regarding market risk disclosures as of 2017 generally indicated that they are eliciting meaningful disclosure in their current form, and that Item 305 disclosures already capture material information about instruments that are intended to hedge against material ESG-related market risks. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 112–14.

323. § 229.305 (2021).

practices in ways that are already being examined by accounting standards setters and industry leaders.[324]

a. Item 101: General Description of the Business

Three aspects of Item 101 relate directly to material ESG disclosure. The first, Item 101(a), requires a narrative description of the business, including material changes to a previously disclosed business strategy.[325] Item 101(a) should therefore already elicit information regarding the material effects of environmental, climate, or other ESG risk events on the company's strategic goals. As amended in 2020, Item 101(c) also requires disclosure of changes in competitive conditions, as well as the material financial effects of complying with environmental and other governmental regulations.[326] Item 101(c) therefore could elicit limited information about companies' employee-related or sustainability risk, though it does not require companies to report information on their workforce or environmental impacts, nor does it require disclosure of the costs of compliance with private sustainability regimes that are increasingly ubiquitous and to which many companies devote significant resources.[327] If, as discussed in Part IV, Congress were to require the SEC to adopt disclosure rules with respect to corporations' external environmental or climate impacts, even if not material in economic terms to the company itself, such disclosures could also be incorporated into Item 101(c). Finally, implementing the expansions to human capital disclosure outlined above would require amendment of Item 101(c)(2)(ii).[328]

b. Item 105: Risk Factors

Item 105 risk factor disclosures are already a primary situs for reporting material ESG risk factors that would make the registrant or an offering of securities "speculative or risky."[329] Investor comments on the SEC's 2016 Regulation S-K Concept Release with respect to risk factor disclosures indicated that over 80% did not believe that Item 105 is "effective for capturing emerging risks" "such as those associated with cybersecurity [or] climate change."[330] Item 105 would therefore be the best place for the SEC to introduce line-item climate risk disclosures that align with the TCFD framework or sector-specific

324. For a review of these issues, see generally IAASB, *infra* note 366 (identifying material aspects of climate-related disclosure for financial statements produced under International Financial Reporting Standards (IFRS)). *See also* sources cited *supra* note 41 (regarding the work of accounting and audit bodies with respect to ESG disclosure and assurance).

325. *See* 17 C.F.R. § 229.101(a)(1) (2020).

326. § 229.101(c)(1)(xii). The 2020 amendments extended disclosure to include the material effects of compliance with all material government regulations, not only environmental laws. 2020 Final Rules, *supra* note 42, at 63728, 63751.

327. *See generally* Vandenbergh, *supra* note 61 (recommending amendments to Regulation S-K to elicit such disclosures).

328. *See* 17 C.F.R. § 229.101(c)(ii) (2020).

329. § 229.105(a) (2020). In 2020, Item 105 was amended to limit disclosure to "material" rather than "significant" risks. 2020 Final Rules, *supra* note 42, at 63744–45.

330. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 110.

environmental or human capital disclosures based on the SASB standards, or specific ESG risk indicators identified by the SEC itself in consultation with the EPA and other federal agencies.[331]

For example, Item 105 would also be an appropriate place to require companies to indicate whether they have established a process for assessing ESG or climate risk materiality, and to identify the key indicators that are relevant to risk materiality assessment, and to indicate the extent of any third-party assurance of that information. The SEC's cybersecurity guidance already identifies some of these indicators, which should include the anticipated probability and magnitude of risk events, anticipated legal and regulatory risks, and the costs of risk mitigation and insurance.[332] ESG risk assessment and related disclosure are both part of the TCFD framework and could strengthen ESG risk management.

If instead the SEC were to introduce its own line-item risk factor disclosures rather than relying on the SASB standards and the TCFD framework, it should do so only on a comply-or-explain basis. As recently as 2019, Item 105 was amended to eliminate representative examples because both investors and the SEC itself were concerned about "boilerplate" or generic risk factor disclosures.[333] Similarly, with respect to ESG factors, the goal should be to encourage firm-specific reporting and adoption of effective risk management processes, which a comply-or-explain approach could facilitate.

c. Item 303: Management Discussion & Analysis (MD&A)

Item 303, Management's Discussion and Analysis (MD&A), requires a narrative discussion of "any known trends or uncertainties" that in the past or in the future are "reasonably" expected to materially affect the firm's financial condition or performance.[334] The MD&A therefore encompasses forward-looking information concerning material ESG risks, as well as unexpected risk events like the COVID-19 pandemic.[335] As forward-looking information, the MD&A is also expressly subject to litigation safe harbors.[336] While the SEC has elected not

331. This Article does not, however, recommend that the SEC identify its own "menus" of material risks or indicators as suggested by some commentators. *See, e.g.*, Esty & Karpilow, *supra* note 129, at 670.

332. *See* 2018 Cybersecurity Guidance, *supra* note 77, at 8166, 8169.

333. FAST Act, *supra* note 1, at 1785 (eliminating risk factor examples in Item 503(c) and relocating Item 503(c) to new Item 105 in Subpart 100 of Regulation S-K).

334. 17 C.F.R. § 229.303(a)(3)(ii) (2020). Under the SEC's current two-step test, a risk is material and must be disclosed in MD&A if management determines (i) that a "known trend, demand, commitment, event or uncertainty is "reasonably likely" to occur; or (ii) if this cannot be done, they must disclose the risk unless they "evaluate objectively the consequences" of the event's occurrence and determine that it is not "reasonably likely" to have a material effect on the company's financial condition or operational results. *See* Management's Discussion and Analysis of Financial Condition and Results of Operations, Certain Investment Company Disclosures, 54 Fed. Reg. 22427 (May 24, 1989) (codified at 17 C.F.R. pts. 211, 231, 241, 271).

335. *See* Jay Clayton & William Hinman, *The Importance of Disclosure—For Investors, Markets and Our Fight Against COVID-19*, SEC (Apr. 8, 2020), https://www.sec.gov/news/public-statement/statement-clayton-hinman [https://perma.cc/QEA9-ZQFQ] (encouraging forward-looking disclosure regarding COVID-19 impacts and mitigation efforts, as well as legal risk).

336. *See* sources cited *supra* note 181.

to require quantification of known trends or uncertainties,[337] its 2020 guidance on MD&A has emphasized the importance of including qualitative or quantitative measures that are necessary to enable investors to evaluate a company's performance.[338] For example, if companies are disclosing as a significant trend or uncertainty the transition to a post-carbon economy, then relevant metrics could include internal carbon-price estimates, or the time frames over which the company measures transition risk.[339]

The MD&A guidance also indicated that additional disclosures to accompany the metric should include how the metric is defined and calculated, why it is "useful" to investors, how management uses it, and if material, an explanation of any changes.[340] This guidance is clearly relevant to ESG information reported in MD&A. It also aligns with the TCFD's recommendations on disclosure of metrics on climate risk and risk mitigation, and its emphasis on quantitative indicators across ESG frameworks. As noted above, SASB has already introduced materiality guidance and industry-specific indicators related to three basic types of climate-related risk: physical risk, regulatory risk, and transition risk.[341] SASB's guidance is also aligned with the TCFD framework.[342]

Because Management's Discussion and Analysis is in narrative form, however, incorporating specific ESG disclosure into MD&A is not likely to address the key comparability challenges of ESG reporting. Companies are not obligated under current law to disclose operational decisions or specific targets under MD&A, such as GHG emissions levels and goals, or climate risk mitigation targets.[343] Moreover, the prospect of 10b-5 liability has caused companies and their counsel to avoid prescriptive disclosure in MD&A, so further efforts to compel more granular disclosure within MD&A are likely to be ineffective.[344] For these reasons, MD&A is not an optimal vehicle for improving the comparability and specificity of ESG disclosure and is at best only a part of a complete ESG disclosure regime.

337. This question was raised in the Regulation S-K Concept Release, *supra* note 15, at 23944.

338. As the SEC has explained, "[w]here there is no commonly accepted method of calculating a particular non-financial metric, the Commission has said that the registrant should provide an explanation of the calculation of the metric to promote comparability across registrants within the industry." MD&A Guidance, *supra* note 262, at 23941–42, 23944 (referencing the 2003 MD&A Interpretative Release). Thus, qualitative or quantitative measures that are necessary to enable investors to evaluate a company's performance must already be identified in MD&A, direction that the SEC reinforced in its 2020 MD&A guidance. *Id.* at 23944.

339. A growing number of companies are adopting internal carbon pricing practices to facilitate transition risk measurement. Joseph E. Aldy & Gianfranco Gianfrate, *Future-Proof Your Climate Strategy*, HARV. BUS. REV. 91 (May–June 2019), https://hbr.org/2019/05/future-proof-your-climate-strategy [https://perma.cc/7FQ6-GFBT].

340. *See id.*

341. CLIMATE RISK TECH. BULL., *supra* note 236, at 5.

342. *See* TCFD 2020 Status Report, *supra* note 113, at 15.

343. *See, e.g.*, Stratte-McClure v. Morgan Stanley, 776 F.3d 94, 103 (2d Cir. 2015).

344. However, courts have generally held that omissions of information in the MD&A must also satisfy the more stringent "probability/magnitude" test of *Basic v. Levinson* in order to be actionable under Rule 10b-5. *See* Oran v. Stafford, 226 F.3d 275, 288 (3d Cir. 2000) (holding an omission under Item 303 of Regulation S-K does not automatically give rise to Rule 10b-5 liability as a material omission); *In re* NVIDIA Corp. Sec. Litig., 768 F.3d 1046, 1054 (9th Cir. 2014) (holding the same); *Stratte-McClure*, 776 F.3d at 100–01 (holding the same).

d. Item 307: Disclosure Controls & Procedures

Rules 13a-15 and 15d-15 of the Exchange Act require companies to maintain disclosure controls and procedures to ensure that management can make timely decisions regarding required disclosure.[345] To the extent ESG information is reported in the public filings, it is of course subject to these same disclosure controls and procedures. Item 307 also requires reporting companies to present the conclusions of the company's senior officers "regarding the effectiveness of the [company's] disclosure controls and procedures."[346] No amendment is needed to Item 307 to bolster the current rule, but the SEC should emphasize in interpretive guidance or instructions to that rule, as it has for cybersecurity risk, the importance of ensuring that robust disclosure controls are established and maintained with respect to ESG risks and that the certification requirements of Item 307 "should take into account the adequacy of controls and procedures for identifying [these] risks . . . and assessing . . . their impact."[347]

e. Item 402: Executive Compensation & Risk

Item 402 is part of a series of "enhanced" disclosures on compensation and corporate governance measures that the SEC adopted in the wake of the financial crisis of 2008 in order to improve transparency about executive compensation practices that affect risk management and overall risk profile.[348] The Compensation Discussion and Analysis (CD&A) required under Item 402(b) requires a narrative discussion of "all material elements" of the company's executive compensation programs, including its goals, what it is designed to incentivize, the specific performance outcomes that are the basis of compensation decisions, which may include achievement of long-term goals, and factors that may materially affect changes in compensation, among other things.[349] To the extent companies already identify reducing negative ESG risks or achieving certain ESG outcomes as material to compensation, the CD&A should already elicit such disclosure. Item 402(s) also requires companies to discuss compensation policies and practices for non-executive officers and other employees as they relate to risk management practices and risk-taking incentives, albeit only if such policies and practices are "reasonably likely to have a materially adverse effect" on the company.[350] Item 402(s) requires companies to discuss compensation policies

345. 17 C.F.R. § 240.13a-15(e) (2013); § 240.15d-15(e) (2013).

346. 17 C.F.R. § 229.307 (internal references omitted). Under Section 404 of the Sarbanes-Oxley Act, Congress also required management's evaluation and attestation as to the adequacy of internal control over financial reporting, a requirement that is incorporated into Item 308. § 229.308. As this Article focuses on non-financial information outside of the financial reports, it does not address potential ESG integration into financial controls.

347. *See* 2018 Cybersecurity Guidance, *supra* note 77, at 8171. The TCFD also stresses the necessity for internal controls for climate risk reporting. TCFD 2017 Report, *supra* note 6, at 18.

348. *See generally* Proxy Disclosure Enhancements, 74 Fed. Reg. 68334 (Dec. 23, 2009) (codified at 17 C.F.R. pts. 229, 239, 240).

349. 17 C.F.R. § 229.402(b) (2019).

350. 17 C.F.R. § 229.402(s) (2019). The SEC has clarified that "reasonably likely" under Item 402(s) is to be interpreted under the two-step test that applies to the MD&A. *See* Proxy Disclosure Enhancements, *supra* note 348, at 68336; *see also supra* note 334 (describing the two-step test).

and practices for nonexecutive officers and other employees as they relate to risk management practices and risk-taking incentives if such policies and practices are "reasonably likely to have a material[ly] adverse effect" on the company.[351]

Many of the largest companies include environmental or sustainability factors in executive compensation benchmarks,[352] and such practices could incentivize risk mitigation and orient risk-taking incentives toward the long-term. The TCFD recommends that companies disclose whether climate risk mitigation is integrated with executive compensation benchmarks for this reason.[353] The SEC, however, does not yet require companies to affirmatively report whether they integrate ESG or long-term risk benchmarks into compensation policies and practices.

Item 402 should be amended to require additional disclosure regarding the integration of ESG factors into executive compensation policies. As Table 2 indicates, implementing the TCFD recommendations would require companies to indicate the extent to which the company's executive compensation policies and practices affect climate risk mitigation. Similarly, Item 402 could be amended to require additional disclosure of whether the company's executive compensation policies incentivize ESG risk mitigation generally. Because they require reporting on the ESG impacts of corporate operations (*i.e.*, corporate externalities), such mandatory disclosures would most likely require congressional authorization. Absent such authorization, the SEC should at least proceed to adopt them on a comply or explain basis.

Notably, the SEC does not require companies to disclose particular performance factors or targets that are used to determine compensation if such disclosure would cause competitive harm to the company.[354] The TCFD's recommended disclosure on climate risk mitigation, however, would not require disclosure of specific performance targets. Amending Item 402(s) to implement the TCFD recommendations is again justified by the systemic risk effects of climate risk information asymmetries.

351. *See* sources cited *supra* note 350.

352. *See* SEMLER BROSSY, ESG + INCENTIVES 2020 REPORT 7 (2020), https://semlerbrossy.com/wp-content/uploads/2021/06/Semler-Brossy-ESG-Report-Issue-1.pdf [https://perma.cc/X2JB-LKE8] (reporting that 62% of Fortune 200 companies do so in their executive compensation programs but that these measures are typically discretionary considerations).

353. *See* TCFD 2017 Report, *supra* note 6, at 37.

354. *See* 17 C.F.R. § 229.402, Instructions to Item 402(b) (regarding the content of the compensation disclosure and analysis (CD&A)). 17 C.F.R. 229.402 (2019).

f. Item 407: The Corporate Board's Role in Risk Oversight

Introduced under the same 2009 proxy disclosure enhancements that created Item 402(s), Item 407(h) requires registrants to disclose (i) "the implementation and effectiveness of any policy the registrant has relating to the consideration of diversity in the identification of nominees;" and (ii) "a description of the board's leadership structure and the board's role in the oversight of risk."[355] This rule already indirectly encompasses the TCFD recommendations about disclosures of board risk oversight of climate risk. But many of the TCFD corporate governance disclosures regarding climate risk management would need to be incorporated more explicitly into Item 407 if TCFD-aligned disclosures are not required to be provided in a separate disclosure section. For example, in order to implement TCFD recommended disclosures on board oversight, the SEC should require companies to disclose on a comply-or-explain basis whether they have integrated material ESG factors into enterprise risk management or not. Item 407 should also be amended to implement the TCFD's further recommendation that companies indicate how they integrate ESG into board-level risk oversight processes and describe their ESG risk mitigation efforts; as shown on Table 2, this too could be done on a comply-or-explain basis.[356]

5. Special Considerations for Risk-Related Disclosure Reform

As I have previously observed, risk-related disclosure is particularly challenging, and ESG disclosure has largely to do with risk. Therefore, in considering the above amendments, and particularly with respect to Item 105 risk factor disclosures, MD&A under Item 303, and corporate governance disclosures under Item 407, the SEC should also clarify within the rules or in related instructions how it intends for companies to address several key questions of particular relevance to risk disclosure. These include (i) whether companies should also disclose risk mitigation efforts; and (ii) the level of assurance that should be required for risk-related information.

a. Risk Mitigation

A critical threshold question for all risk-related disclosures is whether companies should be required to describe their efforts to mitigate ESG risks and if so, whether mitigation disclosure should be limited to financial risk or should extend to corporate externalities. There is considerable ambiguity about the latter distinction in international frameworks. Historically, the SEC has not required mitigation disclosure here or in other provisions of Regulation S-K, out of concern that it might mislead investors into under-estimating the disclosed risk.[357]

355. 17 C.F.R. § 229.407(h) (2019); *see also* Regulation S-K Study, *supra* note 34, at 67.

356. If the SEC elects not to fully harmonize Regulation S-K with the TCFD, it could instead amend Item 407(h) to require companies to provide climate risk disclosures in accordance with a self-selected internationally accepted climate risk disclosure framework and to identify the framework or to state why they do not.

357. Regulation S-K Concept Release, *supra* note 15, at 23960.

These concerns, however, are less salient with respect to climate risk. Since climate risk is systemic in nature, climate risk mitigation disclosure offers benefits to investors and to market stability that extend beyond the mitigation of firm-specific financial risks. Second, investors should readily understand that mitigation is intended to reduce both systemic risk and corporate climate impact in a post-carbon transition, and not only financial risk to the firm itself.

Climate risk mitigation disclosure is a centerpiece of the Biden administration's climate response,[358] and the SEC's 2018 cybersecurity guidance has already encouraged companies to disclose cybersecurity risk mitigation efforts.[359] At the international level, IOSCO's ESG statement, as well as the TCFD climate risk framework, encourage issuers to report on their ESG risk mitigation efforts and to disclose the methodologies they follow in ESG risk assessment.[360] Risk mitigation disclosure was endorsed by President Biden's Executive Order on climate-related financial risk disclosure and is included in several proposals pending before Congress in 2021.[361] It is also strongly supported by U.S. investors.[362.]

This Article recommends that, at minimum, the SEC should develop new climate risk management and mitigation disclosures, perhaps under Item 105 or Item 407 to implement the TCFD framework. To reduce boilerplate narrative about policies and processes, such disclosures should require accompanying information, perhaps in tabular format for each identified risk factor, indicating the key risk measures used to identify the risk as material, whether the risk factor is under monitoring within the company's enterprise risk management (ERM) system, and specific mitigation targets the company has established.

b. Enhanced Reliability for Risk-Related Information

Finally, the goal of any amendment to risk-related provisions of Regulation S-K is to encourage maximum specificity and reliability, particularly regarding the nature of the risk and the processes, estimates, and assumptions that guide risk identification and assessment. The SEC has already articulated these goals in its cybersecurity risk guidance.[363] At the same time, the SEC must take into account the inherent difficulty of estimating risk with any precision. In this regard, it is noteworthy that data from the 2016 Regulation S-K Concept Release, which I have analyzed in prior research, shows that neither investors nor business advocates believe that requiring companies to report estimates of the probability

358. Climate Crisis Executive Order, *supra* note 19.

359. 2018 Cybersecurity Guidance, *supra* note 77, at 8169. As this Article goes to press, the SEC's regulatory agenda includes adopting cybersecurity disclosure rules. SEC Regulatory Agenda, *supra* note 20.

360. *See* IOSCO, *supra* note 5.

361. The Biden Executive Order on Climate-Related Financial Disclosure urges disclosure measures to include risk mitigation reporting. Climate-Related Financial Risk Order, *supra* note 19.

362. Investors and business advocates divided sharply over this question in their responses to the Regulation S-K Concept Release in 2016, but seventy percent of investor responses supported such disclosure. Harper Ho, *Disclosure Overload?, supra* note 49, at 111.

363. *See generally* 2018 Cybersecurity Guidance, *supra* note 77.

and magnitude of particular risks or to rank or quantify material risks is desirable or informative.[364]

There are, however, other ways to improve the quality and reliability of risk-related information. One approach is to require a discussion of risk assessment processes that identifies related qualitative- and quantitative-risk measures, much as the SEC has done with human capital disclosures.[365] Companies could also be required to report whether they have obtained third-party assurance for specific disclosures, such as the material risk factors reported under Item 105. Here, I recommend a principles-based comply-or-explain approach, because the processes on which third-party assurance is based are not yet standardized, and its quality and meaning are therefore uncertain.[366] It is therefore premature to impose additional costs on reporting companies to obtain assurance until there is accepted guidance for and sufficient oversight of assurance standards for information reported in the public filings. More critical at this point is that all corporate disclosures should be subject to effective disclosure controls and procedures with respect to ESG risks, which are already required.[367] As the SEC has noted, these rules are not limited to information that is specifically required to be disclosed but should also "ensure timely collection and evaluation of information *potentially subject to required disclosure,* or *relevant to an assessment of the need to disclose developments and risks that pertain to the company's businesses*."[368]

6. *The Question of Substantiation*

It is critical at this juncture to consider what evidence of materiality must be demonstrated with regard to specific disclosure proposals in order to justify the SEC mandating them in future rulemaking. All of the amendments that are proposed here are intended to align with the materiality standard established in *TSC Industries.*[369] At the same time, as the Second Circuit stated in *In re Time Warner*, information does not become material simply because some investors

364. Harper Ho, *Disclosure Overload?*, *supra* note 49, at 111.

365. *See* sources cited *supra* note 262.

366. *See* ACCT. EUR., TOWARDS RELIABLE NON-FINANCIAL INFORMATION ACROSS EUROPE 1 (2020), https://www.accountancyeurope.eu/wp-content/uploads/Accountancy-Europe-NFI-assurance-practice_facthseet.pdf [https://perma.cc/QG9M-2FFK] (identifying wide variability in assurance requirements and auditor practice with respect to member state implementation of the EU's 2014 Non-Financial Reporting Directive). The International Federation of Accountants (IFAC) and the International Auditing and Assurance Standards Board (IAASB) are working to develop standards for extended assurance that can be used for integrated reporting of ESG information. Kevin Dancey & Charles Tilley, *A Roadmap for Accelerating Integrated Reporting Assurance*, INT'L FED'N ACCTS. (Mar. 31, 2021), https://www.ifac.org/knowledge-gateway/supporting-international-standards/discussion/roadmap-accelerating-integrated-reporting-assurance [https://perma.cc/Q5MG-WETY]; Tom Seidenstein, *Assurance Standards Keeping Pace on Non-Financial Reporting*, INT'L AUDITING & ASSURANCE STANDARDS BD. (IAASB) (Mar. 22, 2021), https://www.iaasb.org/news-events/2021-03/assurance-standards-keeping-pace-non-financial-reporting [https://perma.cc/QGB8-RFFL] (discussing the IAASB's new guidance for non-financial reporting assurance).

367. Related disclosure is required under Item 307, discussed *supra* Section III.C. 17 C.F.R. § 229.307.

368. 2018 Cybersecurity Guidance, *supra* note 77, at 8171 (citations omitted) (emphasis added).

369. *See* TSC Indus., v. Northway, Inc., 426 U.S. 438, 448–49 (1976).

wish to know it.[370] Some commentators have therefore argued that unless there is compelling empirical evidence of the materiality of the specific information a new disclosure will elicit, presumably in terms of investment returns or firm profitability across most sectors, then the SEC should not "declare" it material by requiring its disclosure.[371]

However, a particularized materiality standard of this sort moves beyond the standard set in *TSC Industries, Inc. v. Northway, Inc.*, which assesses materiality in light of the "total mix" of available information, a point the SEC has emphasized in its cybersecurity risk disclosure guidance.[372] Moreover, the SEC's rulemaking authority is not constrained by the materiality standard that applies to securities fraud litigation.[373] Risk assessments often require companies to aggregate data that in isolation may not appear material, and so ESG factors may be material both individually and in the aggregate.[374] In addition, for institutional investors, ESG risks that may not be material to a single firm are often material at the portfolio level, particularly where all companies in a particular industry or in the market as a whole face some degree of exposure.[375] Requiring evidence of particularized materiality is also impracticable and at odds with the primary goal of ESG disclosure reform, which is to remedy the under-identification and under-reporting of information that is important to investors. Finally, when new rule-making is intended to elicit forward-looking information and information about emerging risks, historical data may be unavailable or unhelpful and methodologies that test short-term market reactions to new information may be ill-suited.[376]

While a full treatment of this question is beyond the scope of this Article, I urge that new ESG disclosure reforms should not be required to be substantiated by empirical evidence of materiality, so long as (i) the *type* of information the rule is intended to solicit is understood to be material to the firms to which it applies, or (ii) the disclosure is principles-based (including comply-or-explain disclosures) such that reporting companies may make their own materiality judgments. Of course, new reporting requirements should not duplicate existing requirements. The proposals above therefore focus on categories of information that have been widely recognized as material. This Article leaves for future research empirical testing of the data that new rules may generate.

370. *See* sources cited *supra* note 85 and accompanying text.

371. *See, e.g.*, *Building a Sustainable and Competitive Economy: An Examination of Proposals to Improve Env't, Social and Governance Disclosures: Hearing Before the Subcomm. on Inv. Protection, Entrepreneurship, & Cap. Mkts. of the Comm. on Fin. Services of the U.S. H.R.*, 116th Cong. 7 (July 10, 2019) (testimony of Paul S. Atkins).

372. Basic Inc. v. Levinson, 485 U.S. 224, 231–32 (1988) (quoting TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976)); *see also* 2018 Cybersecurity Guidance, *supra* note 77, at 8168 & n.32 (citing *TSC Industries*).

373. *Supra* note 151 and accompanying text.

374. *See* 2020 GAO REPORT *supra* note 61, at 7 (discussing ESG information).

375. The relevance of portfolio-level materiality is emphasized in Harper Ho, *Risk-Related Activism*, *supra* note 9, at 656, and Coffee, *supra* note 31, at 750.

376. *See* John C. Coates IV, *Cost-Benefit Analysis of Financial Regulation: Case Studies and Implications*, 124 YALE L.J. 882, 919 (2015) (emphasizing that agencies need not "remain inert whenever quantified [cost-benefit analysis is] simply unavailable.").

7. *Supplemental Reporting Guidance*

The evidence from both the SEC's 2010 climate guidance and its cybersecurity guidance shows that regulatory guidance will not be sufficient to address the current limits of ESG reporting.[377] However, any standardized ESG reporting framework developed by the SEC should also be supplemented by guidance to help companies report material ESG information and encourage greater consistency in approaches, particularly if such guidance is not incorporated into Regulation S-K itself. Some of this work could draw on international guidance from the International Accounting Standards Board (IASB) and others. The SEC's 2018 cybersecurity guidance also identifies specific factors that companies should use in materiality risk assessments.[378] Such guidance could also direct companies to use identified third-party frameworks, such as the SASB and TCFD frameworks, in making materiality assessments if this is not already required as this Article recommends. Any ESG guidance should also establish the expectation, as the cybersecurity guidance does, that ESG disclosure will be subject to disclosure control processes, which should include third-party assurance.[379]

Ideally, the SEC should provide ESG materiality guidance directly in the rules themselves or within the instructions to particular rules, to the extent possible. Such approaches are not new. For example, the instructions to Item 103 disclosures on material legal proceedings includes a default quantitative materiality threshold as well as flexibility for an issuer-adopted alternative; Item 305, which requires quantitative and qualitative market risk disclosures, includes specific disclosure alternatives companies can adopt.[380] Similarly, guidance on climate risk or other ESG disclosure could be integrated directly into Item 105 and other relevant rules, or into the instructions to the rules in order to guide risk factor materiality assessments.[381]

Finally, because some climate-related and other ESG risks may emerge beyond the time horizons that are identified as material at present by companies and even some long-term investors, disclosure directed at reducing these risks may require the SEC to provide materiality guidance that directs companies to assess materiality with respect to defined intermediate and long-term timeframes. It may also be appropriate for the SEC to specify parameters for discount rates that are more appropriate for long-term investments, or to require companies to

377. *See* sources cited *supra* note 93 (reporting responses to the 2010 climate guidance and the 2011 cybersecurity guidance).

378. *See* 2018 Cybersecurity Guidance, *supra* note 77, at 8167. These include the costs of risk mitigation, the risk's anticipated probability and magnitude, and the anticipated legal and regulatory risks. *Id.* at 8169 (referencing Item 503(c) risk factor disclosure).

379. *Id.* at 8167.

380. 17 C.F.R. § 229.103 (2020) (requiring disclosure of certain material legal proceedings); 17 C.F.R. § 229.305 (2020) (requiring disclosure of the specific models, assumptions and parameters that are necessary to understand the selected market risk disclosures).

381. The SEC has already used instructions to particular rules elsewhere in Regulation S-K to guide how companies assess materiality. *See, e.g.*, Instructions to Item 101, 17 C.F.R. § 229.101 (2020) (providing examples of the types of factors that should be considered in assessing the materiality of segment information); *see also* 2018 Cybersecurity Guidance, *supra* note 77, at 8169 (identifying risk assessment factors).

explain the assumptions and discount rates they use for long-term costs.[382] In addition, companies should be permitted to use alternative methods accepted in their industry if they identify those parameters, an approach that is already encouraged under the SEC's current MD&A guidance.[383]

IV. RETHINKING CORPORATE DISCLOSURE FOR THE SUSTAINABLE FINANCE REVOLUTION

In 1969, Congress elevated the importance of environmental concerns for all federal agencies by enacting the National Environmental Policy Act (NEPA), which directs them to consider and disclose to the public how environmental concerns inform agency decision-making and rulemaking.[384] In 1973, the SEC responded by adopting the environmental disclosure rules now found in Item 101(c) of Regulation S-K.[385] For nearly 50 years, however, the SEC has not moved beyond its early response to NEPA. Instead, the has SEC repeatedly signaled that unless Congress introduced a similar legislative mandate, rulemaking to standardize climate risk and other ESG disclosure may be beyond its purview.[386]

The Biden administration's commitment to rejoin the Paris Accord and combat climate change has made corporate climate risk disclosure a priority,[387] and his Climate Finance Plan not only prioritizes climate finance and related investment, but also promises the kind of comprehensive cross-agency response to climate change that could drive ESG disclosure reform in the way that NEPA drove early environmental disclosure rules and other federal agency action in 1973.[388] The European Union, meanwhile, has continued to advance comprehensive sustainable finance measures.[389] These include amendments to the 2014 Non-Financial Reporting Directive that will expand its coverage to nearly all large companies and those listed on EU stock exchanges, require more

382. The present value of expected cash flows or costs beyond a five-year period is sensitive to the discount rate and the growth rate, as well as the selected discounting period. Even at low discount rates, the present value of cash flows in the distant future is negligible using standard valuation methods. *See* Harper Ho, *Private Ordering, supra* note 30, at 442; *see sources cited supra* note 168 (citing authorities).

383. *See* MD&A Guidance, *supra* note 262, at 10568, 10569.

384. National Environmental Policy Act of 1969 (NEPA), Pub. L. No. 91-190, 83 Stat. 852 (1970).

385. Regulation S-K Study, *supra* note 34, at 33, n.93 (citing Disclosure with Respect to Compliance with Environmental Requirements and Other Matters, Release No. 33-5386, 38 Fed. Reg. 12100 (Apr. 10, 1973)).

386. *See* Regulation S-K Concept Release, *supra* note 15, at 23973 (seeking comment on whether line-item ESG disclosure "would be consistent with the Commission's rulemaking authority and [its] mission."); *see also* Clayton 2020 Statement, *supra* note 16 (emphasizing with regard to future climate-related disclosure that regulators must be careful to "stay within the bounds of their regulatory mandate.").

387. *See* Climate Finance Plan, *supra* note 19, at 12 (committing the U.S. to align with global efforts to develop harmonized climate disclosure and ESG reporting frameworks); Climate-Related Financial Risk Order, *supra* note 19.

388. Climate Finance Plan, *supra* note 19; Climate Crisis Executive Order, *supra* note 19.

389. For the European Commission's sustainable finance portal, see *Sustainable Finance*, EUR. COMM'N, https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance_en (last visited Nov. 20, 2021) [https://perma.cc/5YWD-XMJM]. The EU has adopted a "climate first" approach but one that also includes a broader range of ESG factors that align with the SDGs.

prescriptive disclosures in accordance with mandatory EU sustainable reporting standards, and mandate assurance (*i.e.*, auditing) of reported information.[390]

Steps to modernize ESG disclosure in the U.S. are an essential foundation for a kind of comprehensive national strategy to address corporate environmental and climate impacts. Even though the SEC already has statutory authority to undertake rulemaking with respect to financial and systemic risks associated with climate change and other material ESG factors, achieving even the more modest reforms presented in Part III will require legislative support.[391] In addition, ESG disclosure alone cannot create strong enough incentives for companies to undertake ESG risk mitigation, much less address climate change or drive a sustainable finance transition.[392] Isolated rulemaking by the SEC along the lines presented in Part III is therefore a potentially inefficient and short-sighted way to achieve these broader public policy goals. This Part explains where Congressional action is needed and identifies further steps the SEC could take to implement more comprehensive ESG disclosure reforms under a new legislative mandate.

A. Modernizing ESG Disclosure: A Legislative Agenda

Although the SEC already has the authority to adopt the market- and investor-oriented recommendations advanced in Part III, these proposals could be implemented more quickly and at less cost to the agency with the clear backing of Congress.[393] Moreover, past practice suggests that disclosure reform directed at changing corporate governance practices may require Congressional authorization.[394]

Most critically, the SEC will be better able to defend new rulemaking against legal challenge when acting under direct Congressional mandate.[395] Precedent in the D.C. Circuit suggests that the Commission's rulemaking will be more likely to be upheld where the SEC can rely on Congress' determination of

390. Directive of the Eur. Parl. & Council Amending Directive 2013/34/EU, Directive 2004/109/EC, Directive 2006/43/EC and Regulation (EU) No 537/2014, as regards corporate sustainability reporting, COM (2021) 189 final (Apr. 21, 2021), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021PC0189&from=EN [https://perma.cc/9HFK-RG8U] (detailing the proposal for a Corporate Sustainability Reporting Directive).

391. *See supra* Section III.A.

392. *See generally* David Hess, *The Transparency Trap: Non-Financial Disclosure and the Responsibility of Business to Respect Human Rights*, 56 AM. BUS. L.J. 5 (2019) (raising concerns about "greenwashing" and observing the limits of disclosure as a regulatory tool); Steven M. Davidoff & Claire A. Hill, *Limits of Disclosure*, 36 SEATTLE U. L. REV. 599 (2013).

393. Indeed, the SEC's authority to "modernize and simplify" disclosure was initially conferred by Congress in the wake of the 2008 financial crisis. JOBS Act, *supra* note 1, § 108; FAST Act, *supra* note 1.

394. *See supra* note 153 and accompanying text.

395. The district court in *National Association of Manufacturers v. SEC (NAM)* distinguished rulemaking adopted by the SEC independently from rulemaking where the SEC was acting under direct mandate from Congress and would therefore be required to rely on Congress' determination of the benefits and purpose of the disclosure rules. 956 F. Supp. 2d 43, 57–58 (D.D.C. 2013), *aff'd in part, rev'd in part by* Nat'l Ass'n of Mfrs. v. SEC, 748 F.3d 359 (D.C. Cir. 2014). The D.C. Circuit in *National Association of Manufacturers v. SEC (NAM II)* appears to have endorsed this principle. 800 F.3d 518, 524 (accepting as a sufficient interest of the United States the humanitarian goals identified by Congress that the SEC sought to achieve in adopting its conflict mineral rules).

the governmental interest motivating the rule, where the court concludes that the rule is likely to be effective in achieving that goal, and where the SEC can show that the rule advances the "economic or investor protection benefits" that the SEC is currently required to consider under its statutory mandate.[396] Authorizing legislation would allow Congress to clearly state its regulatory goals, which could include incentivizing corporate environmental and climate risk mitigation, addressing systemic risk, achieving national climate commitments under the Paris Agreement, and promoting a post-carbon transition. The proposed Corporate Governance Improvement and Investor Protection Act takes important steps in this direction by emphasizing the need for greater ESG disclosure standardization, expanding the SEC's authority to mandate ESG disclosure, and identifying specific objectives for climate risk disclosure mandates.[397]

Authorizing legislation would also enable the SEC to better defend prescriptive risk disclosures against arguments that requiring reporting of material, potentially negative information regarding corporate operational matters or risks constitutes unconstitutional "compelled speech" in violation of the First Amendment.[398] Such concerns have already been raised by sixteen state attorneys general in response to the SEC's invitation to comment on the need for future climate change disclosures.[399] Their comment takes the position that new disclosure rules should be subject to strict scrutiny as content-based compelled speech,[400] rather than the intermediate standard of review that has been applied in prior challenges of SEC disclosure mandates in the D.C. Circuit.[401] Under either test, a clear identification by Congress of its policy goals and a clear statement of its determination that compelling corporate disclosure of ESG information, even negative information, is justified in light of these policy goals. Such a step might enable the SEC to better defend prescriptive risk disclosures against such challenges. This kind of clear legislative mandate is particularly important with respect to climate risk disclosure if these urgently needed reforms are to be adopted and implemented before the window for effective climate change responses has closed.[402]

396. Nat'l Ass'n of Mfrs. v. SEC (NAM II), 800 F.3d. 518, 521 (D.C. Cir. 2015) (citations omitted) (distinguishing the SEC's conflict minerals rules from rules that advance economic or investor protection benefits); *see also id.* at 527 (citations omitted) (emphasizing that the SEC has the burden "of demonstrating that the [rule] it adopt[s] would 'in fact alleviate' the [stated] harms 'to a material degree'").

397. CGIIPA, *supra* note 12, § 102 (presenting findings regarding ESG disclosure), § 402 (stating Congress' findings regarding the urgency of the climate threat, companies' climate-related risk exposure, and the need for standardized climate-risk disclosure).

398. In *NAM II*, the D.C. Circuit struck down portions of the SEC's conflict minerals rule on such grounds. 800 F.3d. 518 at 556.

399. Letter from Patrick Morrisey, W. Va. Att. Gen., et al. to Hon. Gary Gensler, Chair, SEC, Regarding Climate Change Disclosures (June 14, 2021), https://www.sec.gov/comments/climate-disclosure/cll12-8915606-244835.pdf [https://perma.cc/F4FT-CN4Z].

400. *Id.* at 3.

401. *See, e.g.*, *NAM II,* 800 F.3d. 518, 524–25 (applying the intermediate test established in *Cent. Hudson Gas & Elec. Corp. v. Pub. Serv. Comm'n,* 447 U.S. 557, 564–66 (1980)).

402. As the CFTC's 2020 climate risk report stresses, reliable firm-level data on climate risk is needed immediately in order for financial markets to effectively price climate risk and for environmental and climate

In addition to clarifying the public interest that ESG disclosure reform would advance and its rationales, Congress should also identify the anticipated costs and benefits of any new rulemaking it directs the SEC to pursue or even give the SEC greater space to implement disclosure reform by expressly rejecting the kind of quantified cost-benefit analysis that the D.C. Circuit has applied in its review of past agency rulemaking.[403] Quantified cost-benefit analysis has been soundly criticized by academic commentators,[404] and it is particularly suspect in circumstances where compliance costs and the benefits of achieving the stated public policy goals are impossible to quantify or to compare meaningfully.[405] At minimum, Congress should identify the benefits it anticipates from ESG disclosure reform in order to ensure that they are adequately considered by both the agency and the courts. As mentioned earlier, these benefits include the established investor protection and market efficiency benefits of mandatory risk disclosure; the benefits to the capital markets and to investors and reporting companies of greater ESG standardization; and the benefits of reducing systemic climate-related financial risk and lowering the costs to investors, reporting companies, and the capital markets of failing to create a standardized framework for ESG disclosure.[406] Congress should acknowledge that the costs of compliance here may vary widely across reporting companies and should be lower for the many companies who are already monitoring climate risks or voluntarily disclosing ESG information in some form. Finally, Congress should weigh the immense costs to the economy and to public welfare of failing to obtain a clear picture of corporate climate impacts and unchecked climate change.[407]

Even if Congress does not expand the SEC's current statutory authority to encompass sustainability or systemic risk considerations as this Article urges, ESG disclosure will better meet the long-term informational needs of investors if Congress were to establish, or direct the SEC to establish, some of the basic parameters that should govern how companies report forward-looking

risk to be more effectively integrated into investment analysis, financial products, risk management, and prudential regulation. *See generally* CFTC, *supra* note 74. However, even with Congressional authorization, the "specialized disclosures" originally mandated by Dodd-Frank took over a decade to reach their final form following protracted legal challenge. *See* sources cited *supra* notes 395–98 and accompanying text (citing successive appeals to the D.C. Circuit in the litigation over conflict minerals disclosure).

403. This approach was articulated most clearly in Bus. Roundtable v. SEC, 647 F. 3d 1144, 1156 (D.C. Cir. 2011) (striking down the SEC's proxy access rules). For a critical assessment of its application in the courts, see generally Coates, *supra* note 376; Schwartz & Nelson, *supra* note 175.

404. *See* Coates, *supra* note 376, at 918–19 (observing that no statute mandates that rules be justified by empirical evidence); *see also* Memorandum from RSFI and OGC on Current Guidance on Economic Analysis in SEC Rulemakings to Staff of the Rulewriting Divisions and Offices 3 (Mar. 16, 2012), https://www.sec.gov/divisions/riskfin/rsfi_guidance_econ_analy_secrulemaking.pdf [https://perma.cc/RWS3-J7KJ] (noting that "[n]o statute expressly requires [the SEC] to conduct a formal cost-benefit analysis as part of its rule-making activities[]").

405. The costs of non-disclosure and the benefits of transparency are difficult to measure, since information is a public good. Coffee, *supra* note 31, at 723–28 (arguing for this reason that mandatory disclosure regulation is needed to ensure a socially optimal level of disclosure).

406. *See* Harper Ho, *Private Ordering*, *supra* note 30, at 435–56 (discussing the benefits of mandatory risk disclosure and the costs of relying on private ordering to standardize disclosure).

407. *See* sources cited *supra* note 178 and accompanying text (regarding the 2021 estimated social cost of carbon measures, which will ground such an assessment).

information with respect to medium- and long-term time horizons, as outlined above.[408] Similarly, standardization would be advanced with respect to scenario analysis, reducing costs to companies and investors, if the SEC were to identify a menu of common scenarios that companies could reference as the basis of scenario analysis reporting.[409]

Congress can also help ensure that any SEC effort to address ESG disclosure benefits from the direct input of and coordination with other federal agencies, including the Environmental Protection Agency, as well as the CFTC and other financial regulators. Proposed ESG disclosure legislation since at least 2018 has recognized the need for an expert body to assist the SEC, perhaps as part of an inter-agency advisory collaboration.[410] Such coordination is essential to standardize parameters for the metrics that inform climate risk assessment and valuation, as well as to avoid duplication or conflict among disclosure rules established by different agencies, for example, with respect to environmental reporting. Coordination may also help spread enforcement costs across federal agencies. Congress could also consider authorizing the EPA or other agencies to extend environmental or climate reporting obligations to large private companies that do not fall within the SEC's purview, reducing the implicit regulatory costs associated with public listings and ensuring that all firms of a certain scale bear similar compliance costs.

Finally, federal legislation is needed to facilitate a smooth transition toward an enhanced ESG disclosure regime by providing temporary exemptions from liability for ESG information that may be disclosed during the initial implementation period for any new rules, and by taking other steps to reduce the threat of liability related to firm-specific risk disclosure while enhancing reliability. Such exemptions are warranted because investors are demanding more specific information about ESG risk, some of it potentially negative, and because disclosure practice must be free to evolve based on new data and experience. Such an expansion would be particularly helpful during an initial transition period and with respect to historical information on climate-risk information that companies may not have previously reported but that may be necessary for investors to understand forward-looking risk information; historic, factual information is not currently covered under the statutory safe harbors for forward-looking statements.[411] After the initial transition period, safe harbors would still remain with respect to forward-looking information. Along similar lines, Congress should also consider how best to reduce the potential liability risk of reporting companies with respect to material third-party information that may be newly required,

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408. *See* discussion *supra* notes 382–83. The EU's HLEG Report on Sustainable Finance, *supra* note 137, recognizes the need for regulators to "extend the horizon of risk monitoring." *Id.* at 41. Whether regulation or legislation would establish a specific time horizon or only require companies to self-define and report the factors that guide long-term risk assessment would depend on the scope of the authorizing legislation.

409. This approach has been encouraged by the CFTC. *See supra* note 74 and accompanying text.

410. *See, e.g.*, CGIIPA, *supra* note 12, § 403 (identifying lead agencies with relevant expertise on climate change disclosure).

411. PRINCIPLES OF SECURITIES REGULATION 301–03, Thomas L. Hazen, ed. (4th ed. 2017) (discussing the contours of the PSLRA safe harbor, the '33 Act statutory safe harbor and the common law "bespeaks caution" doctrine).

such as Scope 3 GHG emissions of third parties that should be disclosed under the TCFD framework. Here, as it has done elsewhere throughout the securities laws, Congress could provide a due diligence defense for information relating to nonconsolidated entities, which would encourage active oversight by the reporting company as well as the reporting of more comprehensive climate risk data.[412]

B. Climate Risk Disclosure & Sustainable Finance Reform

As the federal government moves to implement its commitments under the Paris Accord and consider the scope of national climate change policy, the disclosure reform recommendations presented here should ideally be part of a more comprehensive national roadmap for a sustainable finance transition.[413] Narrowly, the goals of a sustainable finance strategy would be to facilitate accurate market pricing of climate risk, to standardize definitions and metrics for "green" financial products, to ensure the integrity of reported environmental data, and to reduce systemic risk caused by inadequate climate risk mitigation and information asymmetries around climate-related financial risk.[414] Conceived more broadly, sustainable finance is directed at integrating sustainability considerations into financial systems in order to more effectively allocate capital toward sustainable uses and away from environmentally harmful, unsustainable ones, and to advance sustainable development.[415]

To achieve the narrower economic goals of sustainable finance and develop paths toward broader objectives, governments have adopted coordinated policies across the financial system, including investor stewardship mandates, specific disclosure rules for institutional investors and financial intermediaries,[416] central

412. *See, e.g.*, Securities Act of 1933, § 12(a)(2) (providing with respect to the prospectus or oral communications that defendants in securities fraud litigation may argue that they neither knew, nor reasonably could have been expected to know, of the alleged misstatement or omission).

413. The core elements and outline of sustainable finance reform were initially developed by the United Nations' Environmental Programme Inquiry and have now informed national sustainable finance strategies that have been adopted in the U.K., the European Union, China, and elsewhere. UNEP & WORLD BANK, *supra* note 3; *see, e.g.*, U.K. GREEN FIN. STRATEGY, TRANSFORMING FINANCE FOR A GREENER FUTURE 30 (2019), https://www.gov.uk/government/publications/green-finance-strategy [https://perma.cc/P3TF-7XFM]. The Biden Administration's executive order on climate change states that "[t]he Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy[.]" Climate Crisis Executive Order, *supra* note 19.

414. EU Action Plan, *supra* note 28.

415. In the European Union, sustainable finance is already directed at advancing the United Nations' Sustainable Development Goals (SDGs) and developing regulatory tools to help financial institutions and other companies internalize environmental costs and risks. *Id. See generally* G.A. Res. A/RES/70/1, Transforming Our World: The 2030 Agenda for Sustainable Development (Oct. 21, 2015).

416. *See generally* Regulation (EU) 2019/2088 of the European Parliament and of the Council on Sustainability-related Disclosures in the Financial Services Sector, 2019 O.J. (L 317), 2(24) (defining "sustainability factors" to include "environmental, social and employee matters," as well as "respect for human rights, anti-corruption, and anti-bribery matters"); Regulation (EU) 2019/2089 of the European Parliament and of the Council of 27 November 2019 amending Regulation (EU) 2016/1011 as regards EU Climate Transition Benchmarks, EU Paris-aligned Benchmarks and sustainability-related disclosures for benchmarks, O.J. (L 317) (Dec. 9, 2019) (amending the Markets in Financial Instruments Directive II (MiFID II) to integrate sustainability risks and factors) and the Alternative Investment Fund Managers Directive (AIFMD) and the Undertakings in Collective

bank policies and prudential supervisory standards for banks and other financial institutions,[417] standard definitions for "green" financial products,[418] and standards for sustainable investment.[419] Some of these are being supplemented by voluntary alternatives, which may also aid the SEC and other U.S. agencies in developing new approaches.[420] Setting a price for carbon, as many jurisdictions have done, is another foundational reform.[421] A full discussion of these initiatives is beyond the scope of this Article. Many, however, will require more prescriptive and more expansive ESG information from reporting companies than has been considered thus far, particularly with respect to environmental and climate risk.

It is no doubt apparent at this point that Congress is also at a crossroads with respect to corporate disclosure reform. As controversial as the proposals presented here may be, they all largely fall within a vision of the financial system that is focused on economic objectives and only secondarily on broader goals, like aligning the financial system to benefit the real economy or reducing negative corporate environmental, ecological, and climate impacts. At present, these goals are justified at the corporate level or economy-wide only to the extent they advance instrumental goals that have an economic "business case."[422] Congress can modernize ESG disclosure within this framework. Or Congress could take the opportunity that the climate risk threats present to work with the whole of government to articulate a bolder vision that seeks to closely align the financial system with a post-carbon transition.

Investment in Transferable Securities (UCITS) Directive (investment funds). *See also* ESMA, *supra* note 136, at 3–5 (discussing the centrality of sustainability disclosures under the EU's sustainable finance action plan).

417. *See* BASEL COMM. BANKING SUPERVISION, CLIMATE-RELATED FINANCIAL RISKS: A SURVEY ON CURRENT INITIATIVES 7 (Apr. 2020), https://www.bis.org/bcbs/publ/d502.pdf [https://perma.cc/Q42B-7VXX]; *see also Carbon Capture: Central Bankers Debate Tackling Climate Change*, ECONOMIST (Dec. 14, 2019), https://www.economist.com/finance-and-economics/2019/12/14/central-bankers-debate-tackling-climate-change [https://perma.cc/9ZJL-R23Q] (discussing central bank consideration of policies to address climate-related risks affecting financial institutions).

418. *See* IOSCO, SUSTAINABLE FINANCE, *supra* note 64, at 23 (identifying lack of common definitions and investment product "greenwashing" as key challenges for sustainable finance). The European Union has developed a unified classification system or "taxonomy" so that sustainable finance products and investments are clearly and consistently identified to investors and priced in the market, and so that regulators can measure whether capital flows are promoting sustainable investment, development, and growth. EU Taxonomy, *supra* note 103; *see also* EU TECH. EXPERT GRP. ON SUSTAINABLE FIN., TAXONOMY TECHNICAL REPORT 3 (June 2019), https://ec.europa.eu/info/sites/info/files/business_economy_euro/banking_and_finance/documents/190618-sustainable-finance-teg-report-taxonomy_en.pdf [https://perma.cc/32LL-M852] (establishing guidance and technical screening criteria for application of the taxonomy).

419. Regulation of the Eur. Parl. And Council on the Establishment of a Framework to Facilitate Sustainable Investment and Amending Regulation (EU) 2091/2088), Apr. 2020, at par. 24 (stating a goal to ensure that companies that tell investors they are contributing to environmental objectives are in fact doing so).

420. One such alternative includes the CFA Institute's voluntary ESG disclosure standard for investment products. *See, e.g.*, CFA INST., *supra* note 206; *see also* CFTC, *supra* note 74.

421. On carbon-related benchmarks, see *Proposal for a Regulation of the European Parliament and of the Council on Disclosures Relating to Sustainable Investments and Sustainability Risks and Amending Directive (EU) 2016/2341*, COM (2018) 354 final (May 24, 2018).

422. On the case for a focus on intrinsic goals related to the real economy rather than only economically instrumental ones, see generally DAVID ROUCH, THE SOCIAL LICENCE FOR FINANCIAL MARKETS: REACHING FOR THE END AND WHY IT COUNTS (2020).

Comprehensive ESG disclosure reform that would help mitigate corporate environmental and climate externalities and enable them to be priced in the capital markets may require an expansion of the SEC's statutory authority to undertake rulemaking in the public interest. This is because the justification for such reforms goes beyond investor protection and advancing the efficiency, competitiveness, and stability of the U.S. capital markets. It is not clear, for example, that extending the recommendations in Part III to fully implement the TCFD guidelines and require disclosure of companies' water and energy consumption or corporate environmental harms falls within the SEC's current statutory authority, as such disclosures may not be grounded on either financial materiality or systemic risk concerns.[423] Nonetheless, just as Congress has previously directed the SEC to adopt corporate governance reforms that rely on corporate reporting as a compliance incentive, here, too, Congress could grant rulemaking authority for enhanced ESG disclosures through targeted climate or disclosure legislation. A more groundbreaking approach that may be necessary to implement a sustainable finance transition would be for Congress to define the "public interest" under the Securities Act and the Exchange Act to include environmental protection and sustainability goals or to require that when it is engaged in rulemaking in the "public interest," it take these factors into consideration.[424] Limiting disclosure requirements to a company-focused standard of materiality may hamper any effort to generate data on corporate impacts on climate and the environment, or on corporate contributions to climate risk mitigation and adaptation.

Although these aspects of the SEC's regulatory role are beyond the scope of this Article, Congress could also extend the SEC's supervisory mandate to include sustainability objectives. As the European Union's sustainable finance roadmap has recognized, redirecting capital toward sustainable uses and pricing environmental and climate risks also requires governments to "include sustainability in the supervisory mandate of [securities regulators]."[425] To some extent, the SEC's current enforcement initiatives to prevent greenwashing by ESG funds and its recognition of the need for consistent definitions and standards for sustainable finance products shows that rapid market developments are already requiring the SEC to incorporate sustainability issues into its work.[426]

If Congress were to direct the SEC to extend its reporting requirements to information on particular corporate environmental and climate impacts, it could readily look to a wide range of international models. Many establish mandatory and voluntary ESG disclosures designed to capture not only financially material

423. *See* sources cited *supra* notes 149–53 and accompanying text (discussing the SEC's authority to regulate in the public interest); *see also* CMCC (2018), *supra* note 75, at 12 (criticizing the Dodd-Frank specialized disclosures as divorced from materiality). The TCFD defers to each jurisdiction to define materiality in accordance with national disclosure requirements and encourages organizations to disclose any information that may be incompatible with such rules in separate reports that meet the same standards of reliability as financial reports. TCFD 2017 Report, *supra* note 6, at 17. Mandatory reporting on water consumption and total fossil fuel-related assets are among the measures that would be required under the CGIIPA, *supra* note 12, § 403(5).

424. *See* ESMA, *supra* note 136, at 3–5 (discussing ESMA's expanded supervisory role under the EU's sustainable finance action plan).

425. HLEG REPORT ON SUSTAINABLE FINANCE, *supra* note 137, at 41.

426. *See, e.g.*, SEC Risk Alert, *supra* note 140.

information but also information about broader societal and stakeholder impacts of corporate activity. These include the European Union's 2014 Nonfinancial Reporting Directive, the 2020 World Economic Forum framework, various stock exchange ESG listing standards, and the GRI and other voluntary sustainability reporting frameworks.[427]

Enhanced ESG disclosures that go beyond the proposals in Part III and that could offer greater transparency regarding significant corporate environmental externalities would include mandatory climate risk factor disclosures, Scope 2 and Scope 3 GHG emissions reporting, and environmental and climate risk mitigation practices. Many of these are elements of the TCFD climate risk framework that would not otherwise fall within current materiality assessments at a firm-specific level. In addition, disclosures proposed in Part III to be introduced on a comply-or-explain basis to permit added flexibility and limit reporting to financially material information could become mandatory and subject to specific rulemaking under a sustainable finance mandate in order to promote standardization. These could include, for example, reporting of specific climate-related risk metrics, mitigation targets and performance measures, and the results of specified climate-related scenario analyses, all of which could still be tailored to specific sectors.

Rethinking disclosure as part of broader sustainable finance reforms in this way would almost certainly require a further expansion of the definition of materiality itself to incorporate both financial materiality and materiality with respect to environmental and social impacts. This concept is known as "double materiality," and will likely be the basis of emerging global reporting standards.[428] If Congress adopts a regulatory or stakeholder-oriented approach to disclosure to promote sustainable finance or sustainable development more broadly as the European Union has done,[429] it will also need to follow the lead of the EU in adopting standard definitions for sustainability impacts and creating standardized approaches to environmental risk assessment, the time frames over which materiality should be assessed, and whether the reporting boundaries for such enhanced ESG disclosure would be limited to consolidated entities or extend to business partners and minority interests, among others. The purpose of such reforms would primarily be to use disclosure as a form of indirect regulation to

427. *See, e.g.*, EU NFR Directive, *supra* note 198; WEF Standards, *supra* note 4; GRI Standards, *supra* note 67.

428. The concept of "double materiality" has informed the European Union's 2014 Non-Financial Reporting Directive and related guidance. *See* 2019/C 2019/01 Communication from the Commission—Guidelines on Non-financial Reporting: Supplement on Reporting Climate-related Information, 62 O.J. 1, 4 (June 20, 2019). As the European Commission noted in its 2019 climate-related reporting guidance, the Directive "has a double materiality perspective . . . The reference to the company's 'development, performance [and] position' indicates financial materiality, in the broad sense of affecting the value of the company [while] [t]he reference to "impact of [the company's] activities" indicates environmental and social materiality . . . Companies should consider [disclosing climate-related information] if they decide that climate is a material issue from either of these two perspectives").

429. Some commentators have already considered how mandatory disclosure might expand to align with and inform public regulation, although such proposals are beyond the scope of this Article. *See generally* Ann Lipton, *Not Everything Is About Investors: The Case for Mandatory Stakeholder Disclosure*, 37 YALE J. ON REGUL. 499 (2020) (proposing possible directions).

encourage companies to reduce their environmental and climate impacts. However, efforts to use disclosure in this way are often a second-best alternative to direct regulation of corporate behavior and at the same time may give policymakers a "pass" on adopting alternative policies that might have a greater impact.[430] Legislative proposals pending at the time of this writing could address some of these issues, but they do not yet clearly establish Congress' position on double materiality or the ultimate goals of disclosure reform, nor do they address many of the barriers identified above that have prevented the SEC from undertaking rulemaking in the public interest to achieve broader sustainability goals.[431]

All of these questions would require a greater alignment between financial regulation, accounting, insurance, and disclosure regimes and the public regulatory systems that currently govern environmental protection, resource conservation, and the like. Implementation will also require the SEC to draw on data, metrics, and reporting standards that have been developed in the public sector. For example, international standards have already been developed by the United Nations' Statistical Commission for environmental accounting in order to measure the value of the environmental inputs or "natural capital" that generate economic activity, and its environmental impact.[432] The United States is already compiling data in accordance with these standards,[433] and many others are already being developed that can be used in defining and pricing financial instruments and products and in related disclosure.[434] Modernizing ESG disclosure to ground sustainable finance reforms will depend ultimately, then, on whether and to what extent Congress is willing to expand corporate reporting to directly advance environmental, climate-related, and sustainable development goals, and on the willingness of financial institutions and other public companies to more fully monitor and account for these costs and risks.

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430. On these limits, see, *e.g.*, David Hess, *The Transparency Trap: Non-Financial Disclosure and the Responsibility of Business to Respect Human Rights*, 56 AM. BUS. L.J. 5, 10 (2018) (identifying human rights disclosure regimes as a potential "transparency trap").

431. The most comprehensive current legislative proposal is the Corporate Governance Improvement and Investor Protection Act. *See* CGIIPA, *supra* note 12 and accompanying text.

432. *Ecosystem Accounting*, SYS. ENV'T-ECON. ACCT., https://seea.un.org/ecosystem-accounting (last visited Nov. 20, 2021) [https://perma.cc/N5PY-F2VV] (updating the prior "integrated and comprehensive statistical framework for organizing data about habitats and landscapes, measuring the ecosystem services, tracking changes in ecosystem assets, and linking this information to economic and other human activity.").

433. Lars Hein et al., *Progress in Natural Capital Accounting for Ecosystems*, 367 SCI. 514, 515 (2020).

434. *See, e.g.*, BANK OF ENGLAND, A FRAMEWORK FOR ASSESSING FINANCIAL IMPACTS OF PHYSICAL CLIMATE CHANGE 9 (2019), https://www.bankofengland.co.uk/prudential-regulation/publication/2019/a-framework-for-assessing-financial-impacts-of-physical-climate-change [https://perma.cc/TSS2-4PQM]; EUR. CENT. BANK, GUIDE ON CLIMATE-RELATED AND ENVIRONMENTAL RISKS 28–33 (Nov. 2020), https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmental-risks~58213f6564.en.pdf [https://perma.cc/ABQ8-L49G].

V. Conclusion

Over the past decade, our understanding of ESG materiality, the nature and scale of ESG information asymmetries, and the costs of a system that continues to rely heavily on voluntary reporting has changed dramatically. Calls from investors and financial regulators to standardize ESG disclosure across capital markets globally and to create reporting systems that can shed light on climate-related systemic risk have also become more urgent. As international standard setters move ahead to meet these critical challenges, the SEC stands at a crossroads where the question of whether to join these efforts cannot be divorced from the critical, complex questions of how to do so.

This Article responds by clarifying the difficult choices that confront the effort to modernize ESG disclosure and by advocating a two-tiered approach that leverages accepted reporting frameworks, namely the SASB standards and the TCFD framework, and can create a cost-effective, flexible foundation for the SEC and reporting companies as international harmonization efforts move forward. Specifically, this Article has argued that the SEC should introduce core ESG disclosures on climate-related financial risk, human capital, and related corporate governance matters for all reporting companies, in addition to requiring sector-specific reporting on a comply-or-explain basis. This Article's more prescriptive, nuanced approach better respond to investor demand for comparable, reliable, and accessible information on material ESG risks.

Given the scale of the challenge and the need for rapid implementation of corporate climate risk disclosure in particular, the SEC's task will be far more efficient with legislative backing and a clear congressional mandate. The pace of sustainable finance reform worldwide also demands bold action if corporate reporting is to meet the information demands of a future where sustainability information is available to the markets, where ESG risks are priced for more accurately across financial systems, and where companies begin to internalize the full social and economic costs of their operations. In such a world, it may be that financial incentives can in fact align with long-term sustainability goals for both companies and society as a whole. Modernizing ESG disclosure is now an imperative, and it is time to take the next steps.