SECURITIES AND EXCHANGE COMMISSION

17 CFR 210, 229, 232, 239, and 249

[Release Nos. 33-11042; 34-94478; File No. S7-10-22]

RIN 3235-AM87

The Enhancement and Standardization of Climate-Related Disclosures for Investors

AGENCY: Securities and Exchange Commission

ACTION: Proposed rule.

SUMMARY: The Securities and Exchange Commission ("Commission") is proposing for public comment amendments to its rules under the Securities Act of 1933 ("Securities Act") and Securities Exchange Act of 1934 ("Exchange Act") that would require registrants to provide certain climate-related information in their registration statements and annual reports. The proposed rules would require information about a registrant's climate-related risks that are reasonably likely to have a material impact on its business, results of operations, or financial condition. The required information about climate-related risks would also include disclosure of a registrant's greenhouse gas emissions, which have become a commonly used metric to assess a registrant's exposure to such risks. In addition, under the proposed rules, certain climate-related financial metrics would be required in a registrant's audited financial statements.

DATES: Comments should be received on or before [INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER OR MAY 20, 2022 (WHICH IS 60 DAYS AFTER ISSUANCE), WHICHEVER IS LATER].

ADDRESSES: Comments may be submitted by any of the following methods:

Electronic comments:

- Use the Commission's internet comment form (https://www.sec.gov/rules/submitcomments.htm).
- Send an email to rule-comments@sec.gov. Please include File Number S7-xx-xx on the subject line.

Paper comments:

- Send paper comments to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090.

All submissions should refer to File Number S7-10-22. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method of submission. The Commission will post all comments on the Commission's website (https://www.sec.gov/rules/proposed.shtml). Comments are also available for website viewing and printing in the Commission's Public Reference Room, 100 F Street NE, Washington, DC 20549 on official business days between the hours of 10 a.m. and 3 p.m. Operating conditions may limit access to the Commission's Public Reference Room. All comments received will be posted without change. Persons submitting comments are cautioned that we do not redact or edit personal identifying information from comment submissions. You should submit only information that you wish to make available publicly.

Studies, memoranda, or other substantive items may be added by the Commission or staff to the comment file during this rulemaking. A notification of the inclusion in the comment file of any such materials will be made available on our website. To ensure direct electronic receipt of such notifications, sign up through the "Stay Connected" option at www.sec.gov to receive notifications by email.

FOR FURTHER INFORMATION CONTACT: Elliot Staffin, Special Counsel, Office of Rulemaking, at (202) 551-3430, in the Division of Corporation Finance; or Anita H. Chan, Professional Accounting Fellow or Shehzad K. Niazi, Acting Deputy Chief Counsel, in the Office of the Chief Accountant, at (202) 551-5300, U.S. Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549.

SUPPLEMENTARY INFORMATION: We are proposing to add 17 CFR 210.14-01 and 14-02 (Article 14 of Regulation S-X) and 17 CFR 17 CFR 229.1500 through 1506 (subpart 1500 of Regulation S-K) under the Securities Act[1] and the Exchange Act,[2] and amend 17 CFR 239.11 (Form S-1), 17 CFR 239.18 (Form S-11), 17 CFR 239.25 (Form S-4), and 17 CFR 239.34 (Form F-4) under the Securities Act, and 17 CFR 249.210 (Form 10), 17 CFR 249.220f (Form 20-F), 17 CFR 249.306 (Form 6-K), 17 CFR 249.308a (Form 10-Q), and 17 CFR 249.310 (Form 10-K) under the Exchange Act.

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1 15 U.S.C. 77a *et seq.*

2 15 U.S.C. 78a *et seq.*

I. INTRODUCTION

We are proposing to require registrants to provide certain climate-related information in their registration statements and annual reports, including certain information about climate-related financial risks and climate-related financial metrics in their financial statements. The disclosure of this information would provide consistent, comparable, and reliable—and therefore decision-useful—information to investors to enable them to make informed judgments about the impact of climate-related risks on current and potential investments.

The Commission has broad authority to promulgate disclosure requirements that are "necessary or appropriate in the public interest or for the protection of investors."[3] We have considered this statutory standard and determined that disclosure of information about climate-related risks and metrics would be in the public interest and would protect investors. In making this determination, we have also considered whether the proposed disclosures "will promote efficiency, competition, and capital formation."[4]

We are proposing to require disclosures about climate-related risks and metrics reflecting those risks because this information can have an impact on public companies' financial performance or position and may be material to investors in making investment or voting decisions. For this reason, many investors—including shareholders, investment advisers, and

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3 *See, e.g.*, Section 7 of the Securities Act [15 U.S.C. 77g] and Sections 12, 13, and 15 of the Exchange Act [15 U.S.C. 78*l*, 78m, and 78o].

4 *See, e.g.*, Section 2(b) of the Securities Act [15 U.S.C. 77b(b)] and Section 3(f) of the Exchange Act [15 U.S.C. 78c(f)].

investment management companies—currently seek information about climate-related risks from companies to inform their investment decision-making. Furthermore, many companies have begun to provide some of this information in response to investor demand and in recognition of the potential financial effects of climate-related risks on their businesses.

We are concerned that the existing disclosures of climate-related risks do not adequately protect investors. For this reason, we believe that additional disclosure requirements may be necessary or appropriate to elicit climate-related disclosures and to improve the consistency, comparability, and reliability of climate-related disclosures. With respect to their existing climate-related disclosures (to the extent registrants are already disclosing such information), registrants often provide information outside of Commission filings and provide different information, in varying degrees of completeness, and in different documents and formats—meaning that the same information may not be available to investors across different companies. This could result in increased costs to investors in obtaining useful climate-related information and impair the ability to make investment or voting decisions in line with investors' risk preferences. Also, companies may not disclose certain information needed to understand their existing climate-related disclosures, such as the methodologies, data sources, assumptions, and other key parameters used to assess climate-related risks. To the extent companies primarily provide this information separate from their financial reporting, it may be difficult for investors to determine whether a company's financial disclosures are consistent with its climate-related disclosures.[5] In addition, the information provided outside of Commission filings is not subject

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[5] S&P Global, *Seven ESG Trends to Watch in 2021* (Feb. 7, 2021), available at https://www.spglobal.com/en/research-insights/featured/seven-esg-trends-to-watch-in-2021. This study found that approximately 90% of S&P 500 companies publish sustainability reports but only 16% include any reference to ESG factors in their Commission filings.

to the full range of liability and other investor protections that help elicit complete and accurate disclosure by public companies.

Investors need information about climate-related risks—and it is squarely within the Commission's authority to require such disclosure in the public interest and for the protection of investors—because climate-related risks have present financial consequences that investors in public companies consider in making investment and voting decisions.[6] Investors have noted that climate-related inputs have many uses in the capital allocation decision-making process including, but not limited to, insight into governance and risks management practices,[7] integration into various valuation models, and credit research and assessments.[8] Further, we understand investors often employ diversified strategies, and therefore do not necessarily consider risk and return of a particular security in isolation but also in terms of the security's effect on the portfolio as a whole, which requires comparable data across registrants.[9]

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6 *See* Financial Stability Oversight Council ("FSOC"), Report on Climate-Related Financial Risk 2021 (Oct. 2021) ("2021 FSOC Report"), available at https://home.treasury.gov/system/files/261/FSOC-Climate-Report.pdf (detailing the myriad ways that climate-related risks pose financial threats both at the firm level and financial system level). *See also Managing Climate Risk in the U.S. Financial System*, Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission (2020), available at https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf ("CFTC Advisory Subcommittee Report") (stating that climate-related risks pose a major risk to the stability of the U.S. financial system and to its ability to sustain the American economy).

7 *See, e.g.*, letters from Amalgamated Bank (June 14, 2021); and Norges Bank Investment Management (June 13, 2021).

8 *See, e.g.*, letter from Principles for Responsible Investment (PRI) (Consultation Response) (June 11, 2021).

9 *See, e.g.*, *id*. (stating that broadly diversified investors evaluating any individual asset for addition to a portfolio need to consider its risk and return characteristics not in isolation, but in terms of the asset's effect on the portfolio as a whole, and providing CalPERS as an example of an asset owner holding a diversified growth-oriented portfolio that has integrated climate risk assessment into its investment process); *see also* letter from

While climate-related risks implicate broader concerns—and are subject to various other regulatory schemes—our objective is to advance the Commission's mission to protect investors, maintain fair, orderly and efficient markets, and promote capital formation, not to address climate-related issues more generally. In particular, the impact of climate-related risks on both individual businesses and the financial system as a whole are well documented.[10] For example, the Financial Stability Oversight Council's ("FSOC's") Report on Climate-Related Financial Risk 2021 found that businesses, financial institutions, investors, and households may experience direct financial effects from climate-related risks, and observed that the costs would likely be broadly felt as they are passed through supply chains and to customers and as they reduce firms' ability to service debt or produce returns for investors.[11] As a result, these climate-related risks and their financial impact could negatively affect the economy as a whole and create systemic

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Amalgamated Bank (stating that the principal mitigant of investment risk is diversity of exposure and indicating that comprehensive climate disclosures help investors assess systemic risk); and Norges Bank Investment Management (stating that for sustainability information to support investment decisions, risk management processes, and ownership activities across a diversified portfolio, it must be consistent and comparable across companies and over time).

[10] In 2020 alone, a record 22 separate climate-related disasters with at least $1 billion in damages struck across the United States, surpassing the previous annual highs of 16 such events set in 2011 and 2017. *See* NOAA, National Center for Environmental Information, *Billion Dollar Weather and Climate Disasters: Summary Stats* (3rd Quarter release 2021), available at https://www.ncdc.noaa.gov/billions/summary-stats/US/2020. In 2021, the United States experienced 20 separate billion-dollar climate-related disasters. *See* NOAA, *U.S. saw its 4th-warmest year on record, fueled by a record-warm December* (Jan. 10, 2022), available at https://www.noaa.gov/news/us-saw-its-4th-warmest-year-on-record-fueled-by-record-warm-december.

[11] *See* 2021 FSOC Report, Chapter 1: *From Climate-Related Physical Risks to Financial Risks; From Climate-related Transition Risks to Financial Risks*. We discuss climate-related physical risks and climate-related transition risks in greater detail in Section II.B.1.

risk for the financial system.[12] SEC-reporting companies and their investors are an essential component of this system.[13]

Climate-related risks can affect a company's business and its financial performance and position in a number of ways. Severe and frequent natural disasters can damage assets, disrupt operations, and increase costs.[14] Transitions to lower carbon products, practices, and services, triggered by changes in regulations, consumer preferences,[15] availability of financing,

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12 *See* 2021 FSOC Report, Chapter 1: An Emerging Consensus Framework for Climate-related Financial Risks (stating that these effects would likely propagate through the financial sector, which may experience credit and market risks associated with loss of income, defaults and changes in the values of assets, liquidity risks associated with changing demand for liquidity, and operational risks associated with disruptions to infrastructure). *See also* Financial Stability Board ("FSB"), The Implications of Climate Change for Financial Stability (Nov. 2020) (stating that climate-related effects may be far-reaching in their breadth and magnitude, and could affect a wide variety of firms, sectors and geographies in a highly correlated manner, indicating that the value of financial assets/liabilities could be affected either by the actual or expected economic effects of a continuation of climate-related physical risks, which could lead to a sharp fall in asset prices and increase in uncertainty, or by risks associated with a transition towards a low-carbon economy, particularly if the transition is disorderly, which could have a destabilizing effect on the global financial system). *See also* Basel Committee on Banking Supervision, *Climate-related Risk Drivers and Their Transmission Channels* (Apr. 2021), at https://www.bis.org/bcbs/publ/d517.pdf.

13 *See, e.g.*, The Editors, *Don't Drag Banks Into the Culture Wars*, The Washington Post (Mar. 7, 2022) ("No doubt, all companies — including those in the financial sector — must do more to manage social and environmental risks, in particular those related to climate change. To that end, the Securities and Exchange Commission is rightly working on climate-risk disclosure rules, so investors will have the information they need to make the best possible decisions and to hold public companies accountable.").

14 *See, e.g.*, 2021 FSOC Report, Chapter 1: From Climate-related Physical Risks to Financial Risks.

15 *See, e.g., Why the automotive future is electric*, McKinsey & Company (Sept. 7, 2021), at https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/why-the-automotive-future-is-electric (attributing the shift toward lower emissions forms of transportation, such as electric vehicles, to a combination of regulation, consumer behavior and technology); *A Fifth Of World's Largest Companies Committed To Net Zero Target*, Forbes (Mar. 24, 2021), at https://www.forbes.com/sites/dishashetty/2021/03/24/a-fifth-of-worlds-largest-companies-committed-to-net-zero-target/?sh=2a72640f662f; *See also*, *More than 1,000 companies commit to science-based emissions reductions in line with 1.5°C climate ambition*, Joint Press Release by the United Nations Global Compact and the Science Based Targets Initiative (Nov. 9, 2021), at https://finance.yahoo.com/news/more-1-000-companies-commit-000800027.html (1,045 companies with more than $23 trillion in market capitalization are setting 1.5°C aligned science based targets). *See also*, *Why Engage Suppliers on GHG Emissions?*, EPA Center for Corporate Climate Leadership, at https://www.epa.gov/climateleadership/why-engage-suppliers-ghg-emissions

technology and other market forces,[16] can lead to changes in a company's business model.[17] Governments around the world have made public commitments to transition to a lower carbon economy, and efforts towards meeting those greenhouse gas ("GHG") reduction goals have financial effects that may materially impact registrants.[18] In addition, banking regulators have recently launched initiatives to incorporate climate risk in their supervision of financial

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("As organizations commit to reduce the carbon footprints of the products and services they provide, they look to their suppliers to align their efforts with the organization's sustainability goals").

16 *See, e.g.*, World Economic Forum, *First Movers Coalition is tackling the climate crisis*, at https://www.weforum.org/our-impact/first-movers-coalition-is-tackling-the-climate-crisis/#:~:text=The%20First%20Movers%20Coalition%2C%20which%20was%20launched%20at,companies%20that%20use%20steel%20to%20build%20wind%20turbines ("The World Economic Forum is partnering with the US Special Presidential Envoy for Climate John Kerry and over 30 global businesses to invest in innovative green technologies so they are available for massive scale-up by 2030 to enable net-zero emissions by 2050 at the latest."); *COP26 made net zero a core principle for business. Here's how leaders can act*, McKinsey & Company (Nov. 12, 2021), at What COP26 means for business | McKinsey, at https://www.mckinsey.com/business-functions/sustainability/our-insights/cop26-made-net-zero-a-core-principle-for-business-heres-how-leaders-can-act ("The net-zero imperative is no longer in question—it has become an organizing principle for business. . . leaders who put convincing net-zero plans in place can distinguish their companies from peers. To put that another way: the basis of competition has changed, and there is now a premium on sound net-zero planning and execution."); see also *S&P Dow Jones Indices Launches Net Zero 2050 Climate Transition and Paris-Aligned Select Indices* (Nov. 22, 2021), at https://finance.yahoo.com/news/p-dow-jones-indices-launches-090000812.html (The index is designed to "bring greater transparency in measuring climate-related risks" and help market participants "achieve their goals in the path to net zero by 2050").

17 *See, e.g.*, Juan C.Reboredo and Luis A. Otero, *Are investors aware of climate-related transition risks? Evidence from mutual fund flows*, 189 Ecological Economics (Nov. 2021), available at https://www.sciencedirect.com/science/article/abs/pii/S0921800921002068#!; and BlackRock, *Climate risk and the transition to a low-carbon economy*, available at https://www.blackrock.com/corporate/literature/publication/blk-commentary-climate-risk-and-energy-transition.pdf.

18 *See* Antony J. Blinken, Secretary of State, *The United States Officially Rejoins the Paris Agreement*, Press Statement, (Feb. 19, 2021). 191 countries plus the European Union have now signed the Paris Climate Agreement. The central aim of the Paris Climate Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century to well below 2º Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5º degrees Celsius. *See* Paris Agreement (Paris, Dec. 12, 2015) (entered into force Nov. 4, 2016). Moreover, at the UN Climate Change Conference (COP 26), the United States committed to become net zero by 2050, China by 2060, and India by 2070. Further, over 100 countries formed a coalition to reduce methane emissions by 30 percent by 2030. *See* Environment+Energy Leader, *COP26 Net Zero Commitments will Speed Energy Transition, Increase Pressure on Industries, According to Moody's Report* (Nov. 17, 2021).

institutions.[19] How a company assesses and plans for climate-related risks may have a significant impact on its future financial performance and investors' return on their investment in the company.

Consistent, comparable, and reliable disclosures on the material climate-related risks public companies face would serve both investors and capital markets. Investors would be able to use this information to make investment or voting decisions in line with their risk preferences. Capital allocation would become more efficient as investors are better able to price climate-related risks. In addition, more transparency and comparability in climate-related disclosures would foster competition. Many other jurisdictions and financial regulators around the globe have taken action or reached similar conclusions regarding the importance of climate-related disclosures and are also moving towards the adoption of climate-related disclosure standards.[20]

This proposal builds on the Commission's previous rules and guidance on climate-related disclosures, which date back to the 1970s. In 2010, in response to increasing calls by the public and shareholders for public companies to disclose information regarding how climate change may affect their business and operations, the Commission published guidance ("2010 Guidance") for registrants on how the Commission's existing disclosure rules may require disclosure of the

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[19] *See, e.g.,* OCC announcement: Risk Management: Principles for Climate-Related Financial Risk Management for Large Banks; Request for Feedback | OCC (treas.gov), available at https://www.occ.treas.gov/news-issuances/bulletins/2021/bulletin-2021-62.html; and Principles for Climate-Related Financial Risk Management for Large Banks (treas.gov) (Dec. 16, 2021), available at https://www.occ.treas.gov/news-issuances/bulletins/2021/bulletin-2021-62a.pdf.

[20] *See infra* Section I.C.2.

impacts of climate change on a registrant's business or financial condition.[21] Since that time, as climate-related impacts have increasingly been well-documented and awareness of climate-related risks to businesses and the economy has grown,[22] investors have increased their demand for more detailed information about the effects of the climate on a registrant's business and for more information about how a registrant has addressed climate-related risks and opportunities when conducting its operations and developing its business strategy and financial plans.[23] It is appropriate for us to consider such investor demand in exercising our authority and responsibility to design an effective and efficient disclosure regime under the federal securities laws.

In developing these proposals, we have considered the feedback we have received to date from a wide range of commenters, including comments from investors as to the information they need to make informed investment or voting decisions, as well as concerns expressed by

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21 *See* Commission Guidance Regarding Disclosure Related to Climate Change, Release No. 33-9106 (Feb. 2, 2010) [75 FR 6290 (Feb. 8, 2010)]. We discuss the 2010 Guidance in greater detail in Section I.A. below.

22 *See, e.g., supra* notes 6, 10, and 12.

23 *See, e.g.*, Larry Fink, *A Fundamental Reshaping of Finance*, 2020 Letter to CEOs, at https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter, available at https://www.blackrock.com/corporate/investor-relations/2020-larry-fink-ceo-letter (stating that climate risk is investment risk and asking the companies that BlackRock invests in to, among other matters, disclose climate-related risks in line with the recommendations of the Task Force on Climate-related Financial Disclosures); *see also* Climate Action 100+, at https://www.climateaction100.org/. Climate Action 100+ is an investor-led initiative composed of 615 investors who manage $60 trillion in assets (as of Nov. 2021), who aim "to mitigate investment exposure to climate risk and secure ongoing sustainable returns for their beneficiaries." *See also* Glasgow Financial Alliance for Net Zero (GFANZ), at https://www.gfanzero.com/, a global coalition of leading financial institutions focused on promoting the transition to a net zero global economy. Formed in Apr. 2021, its membership as of Nov. 2021 included over 450 financial firms controlling assets of over $130 trillion. Further, more than 500 investor signatories with assets under management of nearly $100 trillion are signatories to the CDP climate risk disclosure program, https://cdn.cdp.net/cdp-production/comfy/cms/files/files/000/004/697/original/2021_CDP_Capital_Markets_Brochure_General.pdf. We discuss the growing investor demand for climate-related information in greater detail in Section I.C below.

registrants with regard to compliance burdens and liability risk.[24] While our proposals include disclosure requirements designed to foster greater consistency, comparability, and reliability of available information, they also include a number of features designed to mitigate the burdens on registrants, such as phase-in periods for the proposed climate-related disclosure requirements,[25] a safe harbor for certain emissions disclosures,[26] and an exemption from certain emissions reporting requirements for smaller reporting companies.[27] In addition, the existing safe harbors for forward-looking statements under the Securities Act and Exchange Act would be available for aspects of the proposed disclosures.[28]

Although the various requirements we are proposing are supported by overlapping rationales, we emphasize that the different aspects of the proposal serve independent, albeit complementary, objectives. In addition, we have carefully considered how to craft this proposal to best advance investor protection and the public interest, consistent with the Commission's disclosure authority and regulatory mission, and we welcome comments on how we can further achieve that goal.

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24 *See* Acting Chair Allison Herren Lee Public Statement, *Public Input Welcomed on Climate Change Disclosures* (Mar. 15, 2021), available at https://www.sec.gov/news/public-statement/lee-climate-change-disclosures. *See also, e.g.*, *Concept Release: Business and Financial Disclosure Required by Regulation S-K*, Release No. 33-10064 (Apr. 16, 2016), [83 FR 23915 (Apr. 22, 2016)] and related comments, available at https://www.sec.gov/rules/concept/conceptarchive/conceptarch2016.shtml.

25 *See infra* Section II.M.

26 *See* Section II.G.3.

27 *See id*.

28 *See* Securities Act Section 27A [15 U.S.C. 77z-2] and Exchange Act Section 21E [15 U.S.C. 78u-5]. We discuss the application of the existing forward-looking statement safe harbors to the proposed climate-related disclosures primarily in Sections II.C.3-4, II.E, II.G.1, and II.I.

A. Background

The Commission first addressed the disclosure of material environmental issues in the early 1970s when it issued an interpretive release stating that registrants should consider disclosing in their SEC filings the financial impact of compliance with environmental laws.[29] Throughout the 1970s, the Commission continued to explore the need for specific rules mandating disclosure of information relating to litigation and other business costs arising out of compliance with federal, state, and local laws that regulate the discharge of materials into the environment or otherwise relate to the protection of the environment. These topics were the subject of several rulemaking efforts, extensive litigation, and public hearings, all of which resulted in the rules that now specifically address disclosure of environmental issues.[30]

After almost a decade of consideration, the Commission adopted rules in 1982 mandating disclosure of information relating to litigation and other business costs arising out of compliance with federal, state, and local laws that regulate the discharge of materials into the environment or otherwise relate to the protection of the environment.[31] In addition to these specific disclosure

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[29] *See* Release No. 33-5170 (July 19, 1971) [36 FR 13989]. The Commission codified this interpretive position in its disclosure forms two years later. See Release 33-5386 (Apr. 20, 1973) [38 FR 12100] ("1972 Amendments").

[30] *See* Interpretive Release No. 33-6130 (Sept. 27, 1979) [44 FR 56924], which includes a brief summary of the National Environmental Policy Act of 1969 and the legal and administrative actions taken with regard to the Commission's environmental disclosure during the 1970s. *See also NRDC v. SEC*, 606 F.2d 1031, 1036-42 (DC Cir. 1979) (discussing this history). More information relating to the Commission's efforts in this area is chronicled in Release No. 33-6315 (May 4, 1981) [46 FR 25638].

[31] *See* Release No. 33-6383 (Mar. 3, 1982) [47 FR 11380] ("1982 Release") (adopting 17 CFR 229.103, which requires a registrant to describe its material pending legal proceedings, other than ordinary routine litigation incidental to the business, and indicating that administrative or judicial proceedings arising under federal, state, or local law regulating the discharge of materials into the environment or primarily for the purpose of protecting the environment, shall not be deemed "ordinary routine litigation incidental to the business" and must be described if meeting certain conditions). The 1982 Release also moved the information called for by the 1973

requirements, the Commission's other disclosure rules requiring, for example, information about material risks and a description of the registrant's business, could give rise to an obligation to provide disclosure related to the effects of climate change.[32]

In its 2010 Guidance, the Commission observed that, in response to investor demand for climate-related information, many companies were voluntarily reporting climate-related information outside their filings with the Commission. The Commission emphasized that "registrants should be aware that some of the information they may be reporting pursuant to these mechanisms also may be required to be disclosed in filings made with the Commission pursuant to existing disclosure requirements."[33] Specifically, the 2010 Guidance emphasized that climate change disclosure might, depending on the circumstances, be required in a company's Description of Business, Risk Factors, Legal Proceedings, and Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A").[34] The 2010 Guidance further identified certain climate-related issues that companies may need to consider in making their disclosures, including the direct and indirect impact of climate-related

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Amendments to 17 CFR 229.101(c)(1)(xii), which, as part of a registrant's business description, required the disclosure of the material effects that compliance with Federal, State and local provisions regulating the discharge of materials into the environment, or otherwise relating to the protection of the environment, have had upon the registrant's capital expenditures, earnings and competitive position, as well as the disclosure of its material estimated capital expenditures for environmental control facilities. In 2020, the Commission amended 17 CFR 229.101(c)(1) to require, to the extent material to an understanding of the business taken as a whole, disclosure of the material effects that compliance with government regulations, including environmental regulations, may have upon the capital expenditures, earnings, and competitive position of the registrant and its subsidiaries. *See Modernization of Regulation S-K Items 101, 103, and 105*, Release No. 33-10825 (Aug. 26, 2020) [85 FR 63726 (Oct. 8, 2020)] ("2020 Release").

32 *See* Release No. 33-9106, Section III.

33 *See* Release No. 33-9106, Section I.

34 The 2010 Guidance also applies to corresponding disclosure requirements in Form 20-F by foreign private issuers.

legislation or regulations, international agreements, indirect consequences of business trends including changing demand for goods, and the physical impacts of climate change.

The proposals set forth in this release would augment and supplement the disclosures already required in SEC filings. Accordingly, registrants should continue to evaluate the climate-related risks they face and assess whether disclosures related to those climate-related risks must be disclosed in their Description of Business, Risk Factors, Legal Proceedings, and MD&A as described in the 2010 Guidance. These disclosures should be based on the registrant's specific facts and circumstances. While climate risks impact many issuers across industries, the impacts of those risks on a particular registrant and how the registrant addresses those risks are fact-specific and may vary significantly by registrant.[35] The disclosures required by our existing rules should reflect these company-specific risks.

B. The March 2021 Request for Public Input

On March 15, 2021, Acting Chair Allison Herren Lee requested public input on climate disclosure from investors, registrants, and other market participants.[36] The Acting Chair solicited input on several issues, including how the Commission could best regulate disclosure

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[35] Our recent amendments to Item 105 of Regulation S-K discourage the presentation of generic risks that could apply generally to any registrant or offering. The fact that climate risks are broad-based does not, in our view, cause them to be generic. For example, thousands of companies in Houston were impacted by Hurricane Harvey. However, (1) their flood risk varied and some companies may have been far more impacted than others (and would be more vulnerable to future catastrophic storms); (2) their operations were different and some may have been more disrupted as a result than others—*e.g.*, a services business on the 10th floor of a building may have experienced just a few days of disruption while an oil refinery may have been shut down for weeks; and (3) their risk management processes may have been different—two similarly situated companies may have different continuity of operations plans or may have taken steps to mitigate those types of risks. In sum, while the source of the risk may be common to many companies, the impact is not.

[36] *See* Acting Chair Allison Herren Lee Public Statement, Public Input Welcomed on Climate Change Disclosures.

concerning climate change in order to provide more consistent, comparable, and reliable information for investors, whether the Commission should require the disclosure of certain metrics and other climate-related information, the role that existing third-party climate-related disclosure frameworks should play in the Commission's regulation of such disclosure, and whether and how such disclosure should be subject to assurance.

The Commission received approximately 600 unique letters and over 5800 form letters in response to the Acting Chair's request for public input.[37] We received letters from academics, accounting and audit firms, individuals, industry groups, investor groups, registrants, non-governmental organizations, professional climate advisors, law firms, professional investment advisors and investment management companies, standard-setters, state government officials, and US Senators and Members of the House of Representatives.

Many of these commenters, including investors with trillions of dollars of assets under management collectively,[38] supported implementation of climate-related disclosure rules. A number of commenters[39] stated that mandated disclosures are necessary because climate change

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37 The comment letters are available at https://www.sec.gov/comments/climate-disclosure/cll12.htm. Except as otherwise noted, references to comments in this release pertain to these comments.

38 *See*, *e.g.*, letters from BlackRock (June 11, 2021) ($9T); Ceres (June 10, 2021) (representing Investor Network on Climate Risk and Sustainability) ($37T); Council of Institutional Investors (June 11, 2021) ($4T); Investment Adviser Association (June 11, 2021) ($25T); Investment Company Institute (June 4, 2021) ($30.8T); PIMCO (June 9, 2021) ($2T); SIFMA (June 10, 2021) ($45T); State Street Global Advisors (June 14, 2021) (3.9T); and Vanguard Group, Inc. (June 11, 2021) ($7T).

39 *See, e.g.*, letters from AllianceBernstein; Amalgamated Bank; Boston Common Asset Management (June 14, 2021); Calvert Research and Management (June 1, 2021); Ceres; the Committee on Mission Responsibility through Investment by Presbyterian Church (June 10, 2021); Katherine DiMatteo (June 1, 2021); Domini Impact Investments (June 14, 2021); Felician Sisters of North America (June 8, 2021); Friends Fiduciary (June 11, 2021); Melanie Bender (May 26, 2021); Miller/Howard Investments (June 11, 2021); Mercy Investment Services, Inc. (June 4, 2021); Parametric Portfolio Associates, LLC (June 4, 2021); San Francisco City and County Employees' Retirement System (June 12, 2021); Seventh Generation Interfaith, Inc. (May 20, 2021);

poses significant financial risks to registrants and their investors.[40] According to one of the commenters, 68 out of 77 industries are likely to be significantly affected by climate risk.[41] Many commenters criticized the current disclosure practice, in which some issuers voluntarily provide climate disclosures based on a variety of different third-party frameworks, because it has not produced consistent, comparable, reliable information for investors and their advisors, who otherwise have difficulty obtaining that information.[42]

Other commenters, however, questioned whether climate change posed a risk to companies or their investors. These commenters stated their belief that the assumptions underlying the assessment of the impact of climate change were too uncertain to permit companies to ascertain the real risks to their operations and financial condition caused by climate

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State Street Global Advisors; Sustainability Accounting Standards Board (SASB) (May 19, 2021); the Sustainability Group (June 4, 2021); and Trillium Asset Management (June 9, 2021).

40 Several commenters referred to various reports by the Intergovernmental Panel on Climate Change ("IPCC") to demonstrate that there is scientific consensus that climate change is the result of global warming caused by human-induced emissions of greenhouse gases and poses significant global risks. *See, e.g.,* letters from Better Markets (June 14, 2021); Center for Human Rights and Environment (June 9, 2021); Commonwealth Climate and Law Initiative (June 13, 2021); Charles E. Frye (Apr. 3, 2021); Interfaith Center on Corporate Responsibility (June 14, 2021); and Mike Levin and 23 other Members of Congress (June 15, 2021). IPCC's latest report is IPCC,AR6 Climate Change 2021: The Physical Science Basis (Aug. 7, 2021), available at https://www.ipcc.ch/report/ar6/wg1/.

41 *See* letter from SASB.

42 *See, e.g.*, letters from Amalgamated Bank; Bank of Finland (June 1, 2021); Blueprint Financial (June 11, 2021); Canadian Coalition of Good Governance (June 9, 2021); Center for Climate and Energy Solutions (June 12, 2021); Clean Yield Asset Management (June 11, 2021); Coalition for Inclusive Capitalism (June 14, 2021); Felician Sisters of North America; First Affirmative Financial Network (June 2, 2021); William and Flora Hewitt Foundation (June 9, 2021); Impact Investors, Inc. (June 2, 2021); Impax Asset Management(June 9, 2021); Institute of International Bankers (June 8, 2021); Investment Company Institute; Investment Consultants Sustainability Working Group (June 11, 2021); Miller/Howard Investments; Norge Bank Investment Management (June 13, 2021); Parametric Portfolio Associates; Praxis Mutual Funds and Everence Financial (June 10, 2021); PRI (Consultation Response); Salesforce.com Inc. (June 11, 2021); San Francisco City and County Employees' Retirement System; SASB; Seventh Generation Interfaith, Inc.; S&P Global (June 11, 2021); Trillium Asset Management; World Business Council for Development (WBCSD) (June 11, 2021); Vanguard Group, Inc.; and US Impact Investing Alliance (June 14, 2021).

change.[43] These commenters stated that they opposed implementation of climate-related disclosure rules, and argued that such rules would exceed the Commission's statutory authority. Some of these commenters also argued that such rules are not necessary because registrants are already required to disclose material climate risks, or that such rules would be more costly than the current "private ordering" of climate disclosures.[44] Some commenters also argued that mandated climate disclosure rules could violate First Amendment rights.[45]

As noted above, we have considered these comments and other feedback received from the public in formulating the current proposal. As part of its filing review process, the Commission staff also assessed the extent to which registrants currently disclose climate-related risks in their Commission filings. Since 2010, disclosures related to climate change have generally increased, but there is considerable variation in the content, detail, and location (*i.e.*, in reports filed with the Commission, in sustainability reports posted on registrant websites, or elsewhere) of climate-related disclosures. The staff has observed significant inconsistency in the depth and specificity of disclosures by registrants across industries and within the same industry. The staff has found significantly more extensive information in registrants' sustainability reports and other locations such as their websites as compared with their reports filed with the

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43 *See, e.g.*, letters from American Enterprise Institute (June 10, 2021); CO_2 Coalition (June 1, 2021); the Heritage Foundation (June 13, 2021); Steve Milloy (June 1, 2021); Berkeley T. Rulon-Miller (Apr. 9, 2021); and the Texas Public Policy Foundation (June 11, 2021).

44 *See, e.g.*, letters from American Enterprise Institute; the Cato Institute; the Heritage Foundation; and Texas Public Policy Foundation.

45 *See, e.g.*, letters from the Institute for Free Speech (June 10, 2021); Patrick Morrisey, West Virginia Attorney General (Mar. 25, 2021); and Texas Public Policy Foundation.

Commission. In addition, the disclosures in registrants' Forms 10-K frequently contain general, boilerplate discussions that provide limited information as to the registrants' assessment of their climate-related risks or their impact on the companies' business.[46]

We are also mindful of the benefits to investors of requiring climate-related information in SEC filings. Providing more extensive climate-related disclosure in sustainability reports, while excluding such relevant information from Forms 10-K, may make it difficult for investors to analyze and compare how climate-related risks and impacts affect registrants' businesses and consolidated financial statements. The inclusion of climate-related disclosures in SEC filings should increase the consistency, comparability, and reliability of climate-related information for investors. The placement of climate-related information in different locations can make it difficult for investors to find comparable climate-related disclosures, whereas inclusion in a registrant's Form 10-K or registration statement should make it easier for investors to find and compare this information.[47] Further, information that is filed with the Commission in Exchange Act periodic reports is subject to disclosure controls and procedures ("DCP"), which help to ensure that a registrant maintains appropriate processes for collecting and communicating the necessary information by which to formulate the climate-related disclosures.[48] Moreover, information filed as part of a registrant's Form 10-K carries certain additional potential liability,

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[46] The staff of the Division of Corporation Finance has developed a sample comment letter for registrants to elicit improved disclosure on some of the deficient areas noted in their review of filings. *See* Climate Change Disclosure-Sample Letter, available at https://www.sec.gov/corpfin/sample-letter-climate-change-disclosures.

[47] *See, e.g.*, letter from Pricewaterhouse Coopers.

[48] *See* 17 CFR 240.13a-15 and 17 CFR 240.15d-15.

which itself can cause registrants to prepare and review information filed in the Form 10-K more carefully than information presented outside SEC filings.[49]

Having considered the public feedback and the staff's experience with climate-related disclosures, we believe that the current disclosure system is not eliciting consistent, comparable, and reliable information that enables investors both to assess accurately the potential impacts of climate-related risks on the nature of a registrant's business and to gauge how a registrant's board and management are assessing and addressing those impacts.[50] The Commission has broad authority to promulgate disclosure rules that are in the public interest or for the protection of investors and that promote efficiency, competition, and capital formation.[51] In light of the present and growing significance of climate-related risks to registrants and the inadequacies of current climate disclosures, we are proposing to revise our rules to include climate-related

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[49] We note that the liability provisions of Section 10(b) and Rule 10b-5 of the Exchange Act can apply to statements made in filings with the SEC or elsewhere, such as in sustainability reports or on company websites. *See, e.g.*, SEC v. Stinson, No. 10-3130, 2011 U.S. Dist. LEXIS 65723, 2011 WL 2462038, at 12 (E.D. Pa. June 20, 2011) (finding defendants liable under Section 10(b) when they communicated material misstatements and omissions in direct solicitations via e-mail, a webinar, and various web sites). As such, registrants should scrutinize and ensure the accuracy of such statements whether or not filed with the Commission. In addition, information filed in a Form 10-K is subject to Section 18 of the Exchange Act. Further, information filed in an annual report on Form 10-K (and other current and periodic reports) can be incorporated by reference in certain Securities Act registration statements, such as those filed on Form S-3, and thereby become subject to the liability provisions of the Securities Act. *See* Securities Act Section 11 (15 U.S.C. 77k) and Section 12 (15 U.S.C. 77l). *See infra* Section II.C.3-4, II.E, II.G.1, and II.I regarding the application to forward-looking climate disclosures of the safe harbor for forward-looking statements that was added to the Securities Act and Exchange Act pursuant to the Private Securities Litigation Reform Act of 1995.

[50] *See supra* note 42 and accompanying text.

[51] *See* letters from Jill E. Fisch and 18 other law professor signatories (June 11, 2021) (referencing Sections 7, 10, and 19(a) of the Securities Act; and Sections 3(b), 12, 13, 14, 15(d), and 23(a) of the Exchange Act); and Natural Resources Defense Council (June 11, 2021).

disclosure items and metrics to elicit investment decision-useful information that is necessary or appropriate to protect investors.

We also believe that enhanced climate disclosure requirements could increase confidence in the capital markets and help promote efficient valuation of securities and capital formation by requiring more consistent, comparable, and reliable disclosure about climate-related risks, including how those risks are likely to impact a registrant's business operations and financial performance.[52] The proposed requirements may also result in benefits to registrants, given existing costs to registrants that have resulted from the inconsistent market response to investor demand for climate-related information.[53] In this regard our proposal would provide registrants with a more standardized framework to communicate their assessments of climate-related risks as well as the measures they are taking to address those risks.[54] At the same time, we are open to exploring ways in which registrants could be afforded flexibility in making the necessary

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[52] *See* letters from Eni SpA (June 12, 2021); Jill. E. Fisch *et al*; Natural Resources Defense Council; SASB; and Value Balancing Alliance (June 28, 2021); *see also infra* Section IV.

[53] *See, e.g.*, letter from SASB (stating that through the "multiple voluntary disclosure frameworks (*i.e.*, the "alphabet soup" decried by companies)...and numerous direct requests to companies for information through surveys, the current private ordering-led system has increased the burden on companies—and investors—while still leaving many companies uncertain as to whether they are, in practice, providing the decision-useful information required by investors."); *see also* letters from Americans for Financial Reform Education Fund and Public Citizen (June 14, 2021) (stating that "the proliferation of differing frameworks has increased compliance complexities and costs for companies"); Eni SpA (stating that the fragmentation of data fostered by the proliferation of reporting frameworks has multiplied the efforts of companies in satisfying all their requirements); and BSR (June 11, 2021) (providing that "a fragmented environment is limiting the impact of reporting and creating undue confusion and cost on the part of reporters.").

[54] Providing a more standardized framework for climate-related disclosures would be consistent with the Recommendation from the Investor-as-Owner Subcommittee of the SEC Investor Advisory Committee Relating to ESG Disclosure (May 14, 2020) ("IAC Recommendation"), available at https://www.sec.gov/spotlight/investor-advisory-committee-2012/recommendation-of-the-investor-as-owner-subcommittee-on-esg-disclosure.pdf. The term "ESG" refers to environmental, social, and governance matters, of which climate-related disclosures is a part. The IAC Recommendation focused on the inadequacies of ESG disclosures broadly, and not just on those involving climate. The IAC Recommendation stated that, to the extent that SEC reporting obligations would require a single standard of material, decision-useful ESG information, as relevant to each issuer, and based upon data that issuers already use to make their business decisions, such an approach would level the playing field between well-financed large issuers and capital constrained small issuers.

disclosures while still providing appropriate consistency and comparability, and are seeking comment in that regard.

C. The Growing Investor Demand for Climate-Related Risk Disclosure and Related Information

1. Major Investor Climate-Related Initiatives

As the Commission recognized in 2010 and earlier, there has been significant investor demand for information about how climate conditions may impact their investments. That demand has been increasing in recent years. Several major institutional investors, which collectively have trillions of dollars in investments under management, have demanded climate-related information from the companies in which they invest because of their assessment of climate change as a risk to their portfolios, and to investments generally, and also to satisfy investor interest in investments that are considered "sustainable." As a result, these investors have sought to include and consider climate risk as part of their investment selection process.[55] These institutional investors have formed investor initiatives to collectively urge companies to provide better information about the impact that climate change has had or is likely to have on their businesses, and to urge governments and companies to take steps to reduce investors' exposure to climate risks. Among these initiatives:[56]

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55 *See supra* note 23.

56 There is some overlap in the signatories to the listed initiatives.

- In 2019, more than 630 investors collectively managing more than $37 trillion signed the Global Investor Statement to Governments on Climate Change urging governments to require climate-related financial reporting;[57]
- This investor initiative continued as the Investor Agenda's 2021 Global Investor Statement to Governments on the Climate Crisis, which was signed by 733 global institutional investors, including some of the largest investors, with more than US $52 trillion in assets under management in the aggregate. This Statement called for governments to implement a number of measures, including mandating climate risk disclosure.[58]
- The UN Principles for Responsible Investment ("PRI")[59] has acquired over 4,000 signatories who, as of July 13, 2021, have, in the aggregate, assets under management exceeding $120 trillion as of July 13, 2021;[60]

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57 *See* United Nations Climate Change, *631 Institutional Investors Managing More than USD 37 Trillion in Assets Urge Governments to Step up Climate Ambition* (Dec. 9, 2019), available at https://unfccc.int/news/631-institutional-investors-managing-more-than-usd-37-trillion-in-assets-urge-governments-to-step-up.

58 *See* The Investor Agenda, 2021 Global Investor Statement to Governments on the Climate Crisis (Oct. 27, 2021), available at https://theinvestoragenda.org/wp-content/uploads/2021/09/2021-Global-Investor-Statement-to-Governments-on-the-Climate-Crisis.pdf.

59 PRI was created by a UN-sponsored small group of large global investors in 2006. A stated core goal of the PRI is to help investors protect their portfolios from climate-related risks and to take advantage of climate-related opportunities associated with a shift to a low-carbon global economy. *See* PRI, *Climate Change*, available at https://www.unpri.org/climate-change.

60 *See* PRI, *CEO quarterly update: celebrating 4000 signatories and supporting the evolution of PRI* (July 13, 2021), available at https://www.unpri.org/pri-blog/ceo-quarterly-update-celebrating-4000-signatories-and-supporting-the-evolution-of-ri/8033.article.

- The Net Zero Asset Managers Initiative, which was formed by an international group of asset managers, has 128 signatories that collectively manage $43 trillion in assets as of July 2021;[61]
- The Climate Action 100+, an investor-led initiative, now comprises 617 global investors that together have more than $60 trillion in assets under management;[62] and
- The Glasgow Financial Alliance for Net Zero ("GFANZ"), a coalition of over 450 financial firms from 45 countries, responsible for assets of over $130 trillion, that are committed to achieving net-zero emissions by 2050, reaching 2030 interim targets, covering all emission scopes and providing transparent climate-related reporting.[63]

Each of these investor initiatives has emphasized the need for improved disclosure by companies regarding climate-related impacts. Each of these initiatives has advocated for mandatory climate risk disclosure requirements aligned with the recommendations of the Task Force on Climate-Related Financial Disclosures ("TCFD")[64] so that disclosures are consistent, comparable, and reliable. The investor signatories of Climate Action 100+ emphasized that

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[61] *See* Net Zero Asset Managers Initiative*, Net Zero Asset Managers initiative announces 41 new signatories, with sector seeing 'net zero tipping point'* (July 6, 2021), available at https://www.netzeroassetmanagers.org/net-zero-asset-managers-initiative-announces-41-new-signatories-with-sector-seeing-net-zero-tipping-point.

[62] *See* Climate Action 100+, *About Climate Action 100+*, available at https://www.climateaction100.org/about/ (indicating that the initiative is engaging companies on strengthening climate-related financial disclosures).

[63] *See* GFANZ, *About Us*, available at https://www.gfanzero.com/about/. Another organization, the CDP, provides a means for investors to request that companies provide climate-related disclosures through the CDP. In 2021, over 590 investors with $110 trillion in assets under management requested that thousands of companies disclose climate related information to them through the CDP. *See* CDP*, Request Environmental Information*, available at https://www.cdp.net/en/investor/request-environmental-information#d52d69887a88f63e15931b5db2cbe80d.

[64] We discuss the TCFD in greater detail in Section I.D.1 below.

obtaining better disclosure of climate-related risks and companies' strategies to address their exposure to those risks is consistent with the exercise of their fiduciary duties to their respective clients.[65]

At the same time, many companies have made commitments with respect to climate change, such as commitments to reduce greenhouse gas emissions or become "net zero" by a particular date.[66] Companies may make these commitments to attract investors, to appeal to customers that prioritize sustainability, or to reduce their exposure to risks posed by an expected transition to a lower carbon economy.[67] In response to these commitments, investors have demanded more detailed information about climate-related targets and companies' plans to achieve them in order to assess the credibility of those commitments and compare companies based on those commitments.[68]

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[65] *See* Climate Action 100+, *About Climate Action 100+*. Further, commenters noted their fiduciary obligations to consider climate-related risks. *See, e.g.*, letters from PRI (Consultation Response); and California Public Employee Retirement System (CalPERS) (June 12, 2021).

[66] According to one publication, two-thirds of S&P 500 companies had set a carbon reduction target by the end of 2020. *See* Jean Eaglesham, *Climate Promises by Businesses Face New Scrutiny*, The Wall Street Journal (Nov. 5, 2021).

[67] *See* Global Survey Shows Race to Decarbonization is on: Johnson Controls finds Delivering Growth and Competitive Advantage are Main Drivers for Companies to Commit to Net Zero (Dec. 1, 2021), available at https://ih.advfn.com/stock-market/NYSE/johnson-controls-JCI/stock-news/86696470/global-survey-shows-race-to-decarbonization-is-on#:~:text=Global%20Survey%20Shows%20Race%20to%20Decarbonization%20is%20on%3A,December%2001%202021%20-%2007%3A01AM%20PR%20Newswire%20%28US%29; and COP26 made net zero a core principle for business. Here's how leaders can act, McKinsey (Nov. 12, 2021), available at https://www.mckinsey.com/business-functions/sustainability/our-insights/cop26-made-net-zero-a-core-principle-for-business-heres-how-leaders-can-act.

[68] *See, e.g.*, letters from Ceres; Investor Adviser Association (June 11, 2021); SIFMA Asset Management Group (June 10, 2021); Trillium Asset Management; and T. Rowe Price (June 11, 2021); *see also* letters from Boston University Impact Measurement and Allocation Program (June 7, 2021); CDP (June 11, 2021); Christopher Lish (June 12, 2021); and Pricewaterhouse Coopers (June 10, 2021).

These initiatives demonstrate that investors are using information about climate risks now as part of their investment selection process and are seeking more informative disclosures about those risks. As an increasing number of investors incorporate this information, in particular GHG emissions, into their investment selection or voting decisions, this may in turn create transition risks for companies that are seeking to raise capital.

2. Third-Party Data, Voluntary Disclosure Frameworks, and International Disclosure Initiatives

Despite increasing investor demand for information about climate-related risks and strategies, many investors maintain that they cannot obtain the consistent, comparable, and material information that they need to properly inform their investment or voting decisions.[69] In 2020, the Commission's Investor Advisory Committee ("IAC") noted the fragmentation of information that has resulted from a rise in third-party data providers that have emerged to try to meet the informational demands of investors.[70] The IAC recommended that the Commission

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[69] *See supra* note 42.

[70] *See* IAC Recommendation. The IAC Recommendation noted that more than 125 third-party ESG data providers, including ESG ratings firms, have emerged to try to meet the informational demands of investors. According to the IAC Recommendation, these data providers are limited in their ability collectively to provide investors with comparable and consistent information as they use different information sources and different—frequently opaque—methodologies to conduct their analyses, which compromises the usefulness and reliability of the information. This current heterogeneity in practices and disparate demands from investors and ratings firms places a significant burden on companies asked to provide this information in a variety of formats. The IAC Recommendation further observed that many companies feel compelled to respond to the multiple surveys of ESG rating firms because ignoring them or refusing to respond can lead to a low rating, which can adversely affect stock price and access to capital. While the proposed rules would not necessarily eliminate third-party questionnaires, they would help to provide standardized information to all investors and might reduce the need to obtain the information obtained through questionnaires.

take action to ensure investors have the material, comparable, consistent information about climate and other ESG matters that they need to make investment and voting decisions.

In addition, a diverse group of third parties has developed climate-related reporting frameworks seeking to meet investors' informational demands. These include the Global Reporting Initiative ("GRI"),[71] CDP (formerly the Carbon Disclosure Project),[72] Climate Disclosure Standards Board ("CDSB"),[73] Value Reporting Foundation (formed through a merger of the Sustainability Accounting Standards Board ("SASB") and the International Integrated Reporting Council ("IIRC")),[74] and the TCFD.[75]

To some extent, the development of these disparate frameworks has led to an increase in the number of companies that are providing some climate-related disclosures.[76] However, because they are voluntary, companies that choose to disclose under these frameworks may provide partial disclosures or they may choose not to participate every year. In addition, the form and content of the disclosures may vary significantly from company to company, or from

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71 *See* GRI, *About GRI*, available at https://www.globalreporting.org/about-gri/.

72 *See* CDP, *About Us*, available at https://www.cdp.net/en/info/about-us. In 2018, CDP revised its questionnaire to companies so that it aligns with the TCFD recommended framework. *See* letter from CDP.

73 *See* CDSB, *About the Climate Disclosure Standards Board*, available at https://www.cdsb.net/our-story.

74 *See* Value Reporting Foundation, *Understanding the Value Reporting Foundation*, available at https://www.valuereportingfoundation.org/.

75 *See* TCFD, *About*, available at https://www.fsb-tcfd.org/about/.

76 For example, according to the CDP, over 3,000 companies have provided climate-related disclosures through the CDP's platform by responding to the CDP's questionnaires that are aligned with the TCFD's disclosure recommendations. *See* letter from CDP. The TCFD has similarly reported growth in the number of companies and countries supporting its climate-related disclosure recommendations. *See* TCFD, *2021 Status Report* (Oct. 2021), available at https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Status_Report.pdf (stating that, as of Oct. 6, 2021, the TCFD had over 2,600 supporters globally, including 1,069 financial institutions responsible for assets of US $194 trillion).

period to period for the same company. The situation resulting from these multiple voluntary frameworks has failed to produce the consistent, comparable, and reliable information that investors need.[77] Instead, the proliferation of third-party reporting frameworks has contributed to reporting fragmentation, which can hinder investors' ability to understand and compare registrants' climate-related disclosures. An analysis conducted by the World Business Council for Sustainable Development found that investors had difficulty using existing sustainability disclosures because they lack consistency and comparability.[78] In addition, a 2020 study by the Yale Initiative on Sustainable Finance found that the proliferation of reporting frameworks may have made reporting more difficult for issuers.[79] Moreover, given the voluntary nature of these third-party frameworks, there may not be sufficient incentives or external disciplines to ensure that companies are providing complete and robust disclosure under those frameworks.[80]

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[77] *See supra* note 42.

[78] Dr. Rodney Irwin, Alan McGill, *Enhancing the Credibility of Non-Financial Information*, the Investor Perspective, WBCSD and PwC (Oct. 2018).

[79] Yale Initiative on Sustainable Finance, *Toward Enhanced Sustainability Disclosure: Identifying Obstacles to Broader and More Actionable ESG Reporting* (Sept. 2020), available at https://pages.fiscalnote.com/rs/109-ILL-989/images/YISF%20ESG%20Reporting%20White%20Paper.pdf.

[80] *See, e.g.*, TCFD, *2021 Status Report* (indicating that there is a need to improve companies' climate-related disclosures, particularly regarding governance and risk management, to better align with the TCFD's recommendations).

The staff has reviewed more than a dozen studies of climate-related disclosures conducted by third parties, such as the CDP,[81] KPMG,[82] TCFD[83], and Ernst & Young,[84] which assessed the adherence of the climate-related disclosures to various third-party frameworks, such as the TCFD. These studies have reinforced the staff's observations from their review of filings that there is significant variation across companies and industries with regard to the content of current climate disclosures.[85] Further, much of this climate-related information, particularly GHG emissions and targets, appears outside of Commission filings, in sustainability reports, and on corporate websites. Other analyses of current climate reporting have found a lack of transparency and standardization with regard to the methodologies companies apply in disclosing climate-related information.[86]

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[81] *See* CDP, ANALYSIS OF CA100+ COMPANY DATA (2020), available at https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/312/original/Analysis_of_CA100__Data_for_CDP_Investor_Signatories_v5.pdf?1596046258

[82] *See* KPMG, *The Time Has Come-The KPMG Survey of Sustainability Reporting 2020* (Dec. 2020), available at https://assets.kpmg/content/dam/kpmg/xx/pdf/2020/11/the-time-has-come.pdf.

[83] *See* TCFD 2020 Status Report (Sept. 2020), available at https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Status-Report.pdf.

[84] *See* Ernst & Young, *How can climate change disclosures protect reputation and value?-The 2019 EY Global Climate Risk Disclosure Barometer* (Apr. 2020), available at https://www.ey.com/en_us/climate-change-sustainability-services/how-can-climate-change-disclosures-protect-reputation-and-value.

[85] For example, the TCFD report found that the average level of disclosure across the TCFD's 11 disclosure categories was 40% for the energy sector, 30% for the materials and building sector, 18% for the consumer goods sector and 13% for the technology sector. The level of disclosure varied among categories with only 4% or reporting companies disclosing the resilience of their strategies in North America and 50% reporting their risks and opportunities (the category with the highest level of disclosure). The Ernst & Young report found many companies in industries considered to have high exposure to climate-related risks lack high quality climate disclosures. The Ernst & Young report graded the average quality of the disclosures at 27 out of 100.

[86] *See, e.g., The SEC's Time to Act*, Center for American Progress (Feb. 19, 2021) ("[T]here is a lack of standardization of the data, assumptions, and methodologies companies use to meet the standards, with much of this information being opaque. Clearly, the current path of climate disclosure will not provide the transparency that an increasing number of investors are seeking and, indeed, a properly functioning market requires—consistency of disclosures across time, comparability of disclosures across companies, and reliability of the

The increased fragmentation of climate reporting resulting from the proliferation of third-party reporting frameworks has motivated a number of recent international efforts to obtain more consistent, comparable, and reliable climate-related information for investors. For example:

- A consultation paper published by the IFRS Foundation[87] Trustees in 2020 noted the broad range of voluntary sustainability reporting frameworks that have increased complexity and cost to preparers without improving the quality of the information available to investors; [88]
- Based on the response to the IFRS Foundation consultation paper, the IFRS Foundation took steps toward the establishment of an International Sustainability Standards Board ("ISSB") operating within the existing governance structure of the IFRS Foundation;
- In 2021, following two roundtables hosted by its Sustainable Finance Task Force, IOSCO[89] issued a report that concluded that companies' current sustainability disclosures

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information that is disclosed.") See, also, Andy Green and Andrew Schwartz, *Corporate Long-Termism, Transparency, and the Public Interest* (Oct. 2, 2018) ("[C]orporate disclosure available today is insufficient, not comparable, and unreliable"); and *Managing Climate Risk in the U.S. Financial System*, Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission (2020) ("Large companies are increasingly disclosing some climate-related information, but significant variations remain in the information disclosed by each company, making it difficult for investors and others to understand exposure and manage climate risks.").

87 The IFRS Foundation refers to the International Financial Reporting Standards Foundation, which was established to develop a single set of "high-quality," enforceable, and globally accepted accounting standards. *See* *IFRS - Who we are*, available at https://www.ifrs.org/about-us/who-we-are/. The IFRS Foundation was formed in 2010 and succeeded the International Accounting Standards Foundation, which was formed in 2001.

88 IFRS Foundation, *IFRS Foundation Trustees' Feedback Statement on the Consultation Paper on Sustainability Reporting* (Apr. 2021), available at https://www.ifrs.org/content/dam/ifrs/project/sustainability-reporting/sustainability-consultation-paper-feedback-statement.pdf.

89 IOSCO refers to the International Organization of Securities Commissions, of which the Commission is a member.

do not meet investors' needs, and the proliferation of voluntary disclosure frameworks has led to inconsistency in application of the frameworks and, in some cases "cherry picking" of information that might not present an accurate picture of companies' risks.[90]

- A Technical Experts' Group of IOSCO worked with a Technical Readiness Working Group of the IFRS Foundation to assess and fine-tune a prototype climate-related financial disclosure standard ("Prototype") drafted by an alliance of prominent sustainability reporting organizations and designed as a potential model for standards that an ISSB might eventually develop;[91]
- In November 2021, the IFRS Foundation announced the formation of the ISSB.[92] The ISSB is expected to engage in standard setting to build on the Prototype, including developing climate-specific disclosure standards based on the recommendations of the TCFD.[93]

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[90] IOSCO, *Report on Sustainability-related Issuer Disclosures*, Final Report (June 2021) available at https://www.iosco.org/library/pubdocs/pdf/IOSCOPD678.pdf.

[91] *See* CDP, CDSB, GRI, IIRC and SASB, *Reporting on enterprise value Illustrated with a prototype climate-related financial disclosure standard* (Dec. 2020), available at https://29kjwb3armds2g3gi4lq2sx1-wpengine.netdna-ssl.com/wp-content/uploads/Reporting-on-enterprise-value_climate-prototype_Dec20.pdf; and IFRS Foundation, *IFRS Foundation announces International Sustainability Standards Board, consolidation with CDSB and VRF, and publication of prototype disclosure requirements*, available at https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdsb-vrf-publication-of-prototypes/.

[92] *See* IFRS Foundation, *IFRS Foundation announces International Sustainability Standards Board, consolidation with CDSB and VRF, and publication of prototype disclosure requirements* (Nov. 3, 2021), available at https://www.ifrs.org/news-and-events/news/2021/11/ifrs-foundation-announces-issb-consolidation-with-cdsb-vrf-publication-of-prototypes/. At the same time, the IFRS Foundation announced the planned consolidation of the Climate Disclosure Standards Board and the Value Reporting Foundation into the ISSB during 2022. The ISSB is expected to develop reporting standards using the Prototype as a starting point and engaging in rigorous due process under the oversight of the IFRS Foundation Trustees' Due Process Oversight Committee.

[93] *Id.*

- Several jurisdictions, including the European Union,[94] are developing or revising their mandatory climate-related disclosure regimes to provide investors with more consistent, useful climate-related financial information, including associated assurance requirements and data tagging to facilitate the use of the information.[95]

These international developments show an increasing global recognition of the need to improve companies' climate-related disclosures, which the proposed rules would help address, as well as the convergence of investors and issuers around the TCFD as a useful framework for communicating information about climate-related risks that companies may face.

D. Development of a Climate-Related Reporting Framework

In recent years, two significant developments have occurred that support and inform the Commission's proposed climate-related reporting rules. The first involves the TCFD, which has developed a climate-related reporting framework that has become widely accepted by both registrants and investors.[96] The second involves the Greenhouse Gas Protocol ("GHG

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94 *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* (Apr. 2021), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189. In proposing revised corporate sustainability reporting requirements, the EU explained that there exists a widening gap between the sustainability information, including climate-related data, companies report and the needs of the intended users of that information, which may mean that investors are unable to take sufficient account of climate-related risks in their investment decisions.

95 *See* IOSCO, *Report on Sustainability-related Issuer Disclosures*, Final Report (June 2021) (noting progress in several jurisdictions, including Hong Kong, India, Japan, New Zealand and the United Kingdom, to incorporate TCFD's disclosure recommendations into their legal and regulatory frameworks).

96 A number of registrants recommended basing the Commission's climate-related disclosure rules on the TCFD framework. *See, e.g.*, letters from Adobe; Alphabet Inc. *et al.*; BNP Paribas (June 11, 2021); bp; Chevron (June 11, 2021; ConocoPhilips; and Walmart. Similarly, numerous investors and investor groups recommended the TCFD framework. *See* letters from Alberta Investment Management Corporation; BlackRock; CalPERS; CALSTRS (June 4, 2021); Impact Investors, Inc.; and San Francisco Employees Retirement System. *See also*

Protocol"), which has become a leading accounting and reporting standard for greenhouse gas emissions.[97] Both the TCFD and the GHG Protocol have developed concepts and a vocabulary that are commonly used by companies when providing climate-related disclosures in their sustainability or related reports. As discussed in greater detail below, the Commission's proposed rules incorporate some of these concepts and vocabulary, which by now are familiar to many registrants and investors.

1. The Task Force on Climate-Related Financial Disclosure

Our proposed climate-related disclosure framework is modeled in part on the TCFD's recommendations. A goal of the proposed rules is to elicit climate-related disclosures that are consistent, comparable, and reliable while also attempting to limit the compliance burden associated with these disclosures. The TCFD framework has been widely accepted by issuers, investors, and other market participants, and, accordingly, we believe that proposing rules based on the TCFD framework may facilitate achieving this balance between eliciting better disclosure and limiting compliance costs.[98]

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infra Section II.A.1 for further discussion of the many commenters that recommended basing the Commission's climate-related disclosure rules on the TCFD framework.

[97] *See, e.g.*, letter from Natural Resources Defense Council (stating that most companies providing climate-related information do so using the three-part (scope) framework developed by the GHG Protocol and noting other organizations, such as the CDP, that use the GHG Protocol's framework and methodology); *see also* GHG Protocol, Companies and Organizations, available at https://ghgprotocol.org/companies-and-organizations (stating that 92% of companies responding to the CDP in 2016 used the GHG Protocol's standards and guidance).

[98] *See infra* Section II.A.1 and notes 145 through 149.

In April 2015, the Group of 20 Finance Ministers directed the Financial Stability Board ("FSB") to evaluate ways in which the financial sector could address climate-related concerns.[99] The FSB concluded that better information was needed to facilitate informed investment decisions and to help investors and other market participants to better understand and take into account climate-related risks. The FSB established the TCFD, an industry-led task force charged with promoting better-informed investment, credit, and insurance underwriting decisions.[100] Since then, the framework for climate-related disclosures developed by the TCFD has been refined and garnered global support as a reliable framework for climate-related financial reporting.[101]

In 2017, the TCFD published disclosure recommendations that provide a framework by which to evaluate material climate-related risks and opportunities through an assessment of their projected short-, medium-, and long-term financial impacts on a registrant. The TCFD framework establishes eleven disclosure topics related to four core themes that provide a

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[99] *See* TCFD, 2020 Status Report (Oct. 2020). The Group of 20 ("G20") is a group of finance ministers and central bank governors from 19 countries, including the United States, plus the European Union, which was formed in 1999 to promote global economic growth, international trade, and regulation of financial markets. According to the G20, its members represent more than 80% of world GDP, 75% of international trade, and 60% of the world population. *See* G20, About the G20, available at https://g20.org/about-the-g20/.

[100] See TCFD, *Recommendations of the Task Force on Climate-related Financial Disclosures* (June 2017), available at https://assets.bbhub.io/company/sites/60/2020/10/FINAL-2017-TCFD-Report-11052018.pdf.

[101] *See, e.g.*, Climate Action 100+, *The Three Asks*, available at https://www.climateaction100.org/approach/the-three-asks/ (requiring participating investors to ask the companies with which they engage to provide enhanced corporate disclosure in line with the TCFD's recommendations; and CDP, *How CDP is aligned to the TCFD*, available at https://www.cdp.net/en/guidance/how-cdp-is-aligned-to-the-tcfd (explaining how the CDP has aligned its questionnaires to elicit disclosures aligned with the TCFD's recommendations).

structure for the assessment, management, and disclosure of climate-related financial risks: governance, strategy, risk management, and metrics and targets.[102]

Support for the TCFD's recommendations by companies and other reporting frameworks has grown steadily since the TCFD's formation.[103] As of October 2021 more than 2,600 organizations globally, with a total market capitalization of $25 trillion have expressed support for the TCFD.[104] Further, 1,069 financial institutions, managing assets of $194 trillion, also support the TCFD.[105] In recognition of the widespread adoption by companies of TCFD reporting, a number of countries, including the United Kingdom, New Zealand, and Switzerland, and the European Union that have proposed mandatory climate-risk disclosure requirements have indicated an intention to base disclosure requirements on the TCFD framework.[106] Further, the TCFD's recommendations have been adopted by, and incorporated into, other voluntary

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102 *See* TCFD, *TCFD_Booklet_FNL_Digital_March-2020.pdf (bbhub.io)* (Mar. 2021), available at https://assets.bbhub.io/company/sites/60/2020/10/TCFD_Booklet_FNL_Digital_March-2020.pdf.

103 According to the TCFD, "[for] companies, support is a commitment to work toward their own implementation of the TCFD recommendations." https://www.fsb-tcfd.org/support-tcfd/

104 *See* TCFD, 2021 Status Report. A recent survey by Moody's of over 3,800 companies worldwide indicated that the global average disclosure rate of companies that reported across all 11 TCFD's recommendations increased to 22% in 2021 from 16% in 2020. *See* Moody's *State of TCFD Disclosures 2021*, available at https://assets.website-files.com/5df9172583d7eec04960799a/616d36184f3e6431a424b9df_BX9303_MESG_State%20of%20TCFD%20Disclosures%202021.pdf. In addition, according to a recent report by the Governance & Accountability Institute, Inc., 70% of companies in the Russell 1000 Index published sustainability reports in 2020, and of those reporters, 30% mentioned or aligned their disclosures with the TCFD framework, and 40% responded to the CDP questionnaires, which are aligned with the TCFD. *See* Governance & Accountability Institute, *Sustainability Reporting in Focus, 2021*, available at https://www.ga-institute.com/fileadmin/ga_institute/images/FlashReports/2021/Russell-1000/G_A-Russell-Report-2021-Final.pdf?vgo_ee=NK5m02JiOOHgDiUUST7fBRwUnRnlmwiuCIJkd9A7F3A%3D. We discuss the findings of this report, and other similar findings, in greater detail in Section IV.A.5.c below.

105 *See* TCFD, *2021 Status Report*.

106 *See id*.

climate disclosure frameworks such as the CDP, GRI, CDSB, and SASB frameworks. The TCFD also forms the framework for the Prototype that the IFRS Foundation provided to the ISSB as a potential starting point for its standard setting initiative.[107] The G7 Finance Ministers and Central Bank Governors have also endorsed the TCFD.[108] As a result, although the reporting landscape is crowded with voluntary standards that seek different information in different formats, the TCFD framework has been widely endorsed by U.S. companies and regulators and standard-setters around the world.

2. The Greenhouse Gas Protocol

Quantitative greenhouse gas ("GHG") emissions data can enable investors to assess a registrant's exposure to climate-related risks, including regulatory, technological, and market risks driven by a transition to a lower-GHG intensive economy.[109] This data also could help investors to assess the progress of registrants with public commitments to reduce GHG emissions, which would be important in assessing potential future capital outlays that might be required to meet such commitments. For these reasons, many investors and other commenters recommended that we require disclosure of a registrant's GHG emissions.[110] Many commenters

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[107] *See* Climate-related Disclosures Prototype, Developed by the Technical Readiness Working Group, chaired by the IFRS Foundation, to provide recommendations to the International Sustainability Standards Board for consideration (Nov. 2021).

[108] HM Treasury, *G7 Finance Ministers and Central Bank Governors Communique – Policy Paper* (June 2021), available at https://www.gov.uk/government/publications/g7-finance-ministers-meeting-june-2021-communique/g7-finance-ministers-and-central-bank-governors-communique (stating their support of mandatory climate-related financial disclosures based on the TCFD framework because of investors' need for high quality, reliable, comparable climate-risk data).

[109] *See, e.g.*, letters from Calvert Research and Management (June 1, 2021); Ceres *et al* (June 10, 2021); NY State Comptroller (June 8, 2021); and SASB (May 19, 2021).

[110] *See infra* Section II.G.1 and note 412.

also recommended that we base any GHG emissions disclosure requirement on the GHG Protocol.[111] These commenters indicated that the GHG Protocol has become the most widely-used global greenhouse gas accounting standard.[112] For example, the Environmental Protection Agency ("EPA") Center for Corporate Climate Leadership references the GHG Protocol's standards and guidance as resources for companies that seek to calculate their GHG emissions.[113]

The GHG Protocol was created through a partnership between the World Resources Institute and the World Business Council for Sustainable Development, which agreed in 1997 to collaborate with businesses and NGOs to create a standardized GHG accounting methodology.[114] The GHG Protocol has been updated periodically since its original publication and has been broadly incorporated into sustainability reporting frameworks, including the TCFD, Value Reporting Foundation, GRI, CDP, CDSB, and the IFRS Foundation's Prototype.

The GHG Protocol's Corporate Accounting and Reporting Standard provides uniform methods to measure and report the seven greenhouse gasses covered by the Kyoto Protocol – carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur

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[111] *See, e.g.*, letters from Apple, Inc. (June 11, 2021); bp (June 11, 2021); Carbon Tracker Initiative (June 14, 2021); Consumer Federation of America (June 14, 2021); ERM CVS (June 11, 2021); Ethic Inc. (June 11, 2021); First Affirmative Financial Network; Regenerative Crisis Response Committee; MSCI, Inc. (June 12, 2021); Natural Resources Defense Council; New York State Society of Certified Public Accountants(June 11, 2021); Paradice Investment Management (June 11, 2021); Stray Dog Capital(June 15, 2021); and Huw Thomas (June 16, 2021).

[112] *See, e.g.*, letters from ERM CVS; and Natural Resources Defense Council; *see also* Greenhouse Gas Protocol, *About Us | Greenhouse Gas Protocol*, available at https://ghgprotocol.org/about-us.

[113] *See, e.g.*, EPA Center for Corporate Climate Leadership, *Scope 1 and Scope 2 Inventory Guidance*, at https://www.epa.gov/climateleadership/scope-1-and-scope-2-inventory-guidance.

[114] *See* Greenhouse Gas Protocol, *About Us | Greenhouse Gas Protocol (ghgprotocol.org)*, available at https://ghgprotocol.org/about-us.

hexafluoride, and nitrogen trifluoride.[115] The GHG Protocol introduced the concept of "scopes" of emissions to help delineate those emissions that are directly attributable to the reporting entity and those that are indirectly attributable to the company's activities.[116] Under the GHG Protocol, Scope 1 emissions are direct GHG emissions that occur from sources owned or controlled by the company. These might include emissions from company-owned or controlled machinery or vehicles, or methane emissions from petroleum operations. Scope 2 emissions are those emissions primarily resulting from the generation of electricity purchased and consumed by the company.[117] Because these emissions derive from the activities of another party (the power provider), they are considered indirect emissions. Scope 3 emissions are all other indirect emissions not accounted for in Scope 2 emissions. These emissions are a consequence of the company's activities but are generated from sources that are neither owned nor controlled by the company.[118] These might include emissions associated with the production and transportation of

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[115] *See id*. The Kyoto Protocol, adopted in 1997, implemented the United Nations Framework Convention on Climate Change by obtaining commitments from industrialized countries to reduce emissions of the seven identified gasses according to agreed targets. *See* United Nations Climate Change, What is the Kyoto Protocol?*, available at* https://unfccc.int/kyoto_protocol. The EPA includes these seven greenhouse gases in its greenhouse gas reporting program. *See, e.g.*, EPA, *GHGRP Emissions by GHG*, available at https://www.epa.gov/ghgreporting/ghgrp-emissions-ghg.

[116] *See* World Business Council for Sustainable Development and World Resources Institute, *The Greenhouse Gas Protocol, A Corporate Accounting and Reporting Standard* REVISED EDITION, available at https://ghgprotocol.org/corporate-standard.

[117] *Id*.

[118] The Scope 3 emissions standard was developed over a three-year period with participation by businesses, government agencies, academics, and NGOs to help companies understand and manage their climate-related risks and opportunities in their upstream and downstream value chains. *See* Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard* (Sept. 2011), available at https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf. This standard identified eight upstream and seven downstream emission categories that can give rise to Scope 3 emissions. The GHG Protocol is developing additional guidance that may impact

goods a registrant purchases from third parties, employee commuting or business travel, and the processing or use of the registrant's products by third parties.[119]

We have based our proposed GHG emissions disclosure requirement primarily on the GHG Protocol's concept of scopes and related methodology.[120] By basing this requirement on an established GHG emissions reporting framework, we believe the compliance burden would be mitigated, especially for those registrants that are already disclosing or estimating their GHG emissions pursuant to the GHG Protocol.

E. Summary of the Proposed Rules

We are proposing to add a new subpart to Regulation S-K, 17 CFR 229.1500-17 CFR 229.1507 ("Subpart 1500 of Regulation S-K") that would require a registrant to disclose certain climate-related information, including information about its climate-related risks that are reasonably likely to have material impacts on its business or consolidated financial statements, and GHG emissions metrics that could help investors assess those risks.[121] A registrant may also include disclosure about its climate-related opportunities. The proposed new subpart to

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Scope 3 emissions related to land use and land sector activities. *See* Greenhouse Gas Protocol, *Update on Greenhouse Gas Protocol Carbon Removals and Land Sector Initiative* (July 8, 2021), available at https://ghgprotocol.org/blog/update-greenhouse-gas-protocol-carbon-removals-and-land-sector-initiative.

[119] *See* Section II.G.1, below, for a more extensive discussion of Scope 3 categories and emissions.

[120] *See id*.

[121] *See infra* Sections II.B through E and II.G through I.

Regulation S-K would include an attestation requirement for accelerated filers[122] and large accelerated filers[123] regarding certain proposed GHG emissions metrics disclosures.[124]

We are also proposing to add a new article to Regulation S-X, 17 CFR 210.14-01-17 CFR 210.14-02 ("Article 14 of Regulation S-X") that would require certain climate-related financial statement metrics and related disclosure to be included in a note to a registrant's audited financial statements.[125] The proposed financial statement metrics would consist of disaggregated climate-related impacts on existing financial statement line items. As part of the registrant's financial statements, the financial statement metrics would be subject to audit by an independent registered public accounting firm, and come within the scope of the registrant's internal control over financial reporting ("ICFR").[126]

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[122] *See* 17 CFR 240.12b-2 (defining "accelerated filer" as an issuer after it first meets the following conditions as of the end of its fiscal year: (i) the issuer had an aggregate worldwide market value of the voting and non-voting common equity held by its non-affiliates of $75 million or more, but less than $700 million, as of the last business day of the issuer's most recently completed second fiscal quarter; (ii) the issuer has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months; (iii) the issuer has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act; and (iv) the issuer is not eligible to use the requirements for SRCs under the SRC revenue test).

[123] *See* 17 CFR 240.12b-2 (defining "large accelerated filer" as an issuer after it first meets the following conditions as of the end of its fiscal year: (i) the issuer had an aggregate worldwide market value of the voting and non-voting common equity held by its non-affiliates of $700 million or more, as of the last business day of the issuer's most recently completed second fiscal quarter; (ii) the issuer has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months; (iii) the issuer has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act; and (iv) the issuer is not eligible to use the requirements for SRCs under the SRC revenue test).

[124] *See infra* Section II.H.

[125] *See infra* Section II.F.

[126] *See infra* Sections II.F.2 and 3.

1. Content of the Proposed Disclosures

The proposed climate-related disclosure framework is modeled in part on the TCFD's recommendations, and also draws upon the GHG Protocol. In particular, the proposed rules would require a registrant to disclose information about:

- The oversight and governance of climate-related risks by the registrant's board and management;[127]
- How any climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term;[128]
- How any identified climate-related risks have affected or are likely to affect the registrant's strategy, business model, and outlook;[129]
- The registrant's processes for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant's overall risk management system or processes;[130]
- The impact of climate-related events (severe weather events and other natural conditions as well as physical risks identified by the registrant) and transition activities (including transition risks identified by the registrant) on the line items of a registrant's consolidated

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127 *See infra* Section II.D.

128 *See infra* Sections II.B and C.

129 *See infra* Section II.C.

130 *See infra* Section II.E.

financial statements and related expenditures,[131] and disclosure of financial estimates and assumptions impacted by such climate-related events and transition activities.[132]

- Scopes 1 and 2 GHG emissions metrics, separately disclosed, expressed:
    - Both by disaggregated constituent greenhouse gases and in the aggregate, and
    - In absolute and intensity terms;[133]
- Scope 3 GHG emissions and intensity, if material, or if the registrant has set a GHG emissions reduction target or goal that includes its Scope 3 emissions; and
- The registrant's climate-related targets or goals, and transition plan, if any.[134]

When responding to any of the proposed rules' provisions concerning governance, strategy, and risk management, a registrant may also disclose information concerning any identified climate-related opportunities.

2. Presentation of the Proposed Disclosures

The proposed rules would require a registrant (both domestic and foreign private issuers[135]):

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131 *See infra* Sections II.F.2 and 3.

132 *See infra* Sections II.F.4.

133 *See infra* Section II.G.1.

134 *See infra* Section II.I.

135 As defined by Commission rules, a foreign private issuer is any foreign issuer other than a foreign government except an issuer meeting the following conditions as of the last business day of its most recently completed second fiscal quarter: more than 50% of the outstanding voting securities of such issuer are directly or indirectly owned of record by residents of the United States; and either the majority of its executive officers or directors are United States citizens or residents, more than 50% of the assets of the issuer are located in the United States, or the business of the issuer is administered principally in the United States. *See* 17 CFR 230.405 and 17 CFR 240.3b-4.

- To provide the climate-related disclosure in its registration statements and Exchange Act annual reports;[136]
- To provide the Regulation S-K mandated climate-related disclosure in a separate, appropriately captioned section of its registration statement or annual report, or alternatively to incorporate that information in the separate, appropriately captioned section by reference from another section, such as Risk Factors, Description of Business, or Management's Discussion and Analysis ("MD&A");[137]
- To provide the Regulation S-X mandated climate-related financial statement metrics and related disclosure in a note to the registrant's audited financial statements;[138]
- To electronically tag both narrative and quantitative climate-related disclosures in Inline XBRL;[139] and
- To file rather than furnish the climate-related disclosure.[140]

3. Attestation for Scope 1 and Scope 2 Emissions Disclosure

The proposed rules would require an accelerated filer or a large accelerated filer to include, in the relevant filing, an attestation report covering, at a minimum, the disclosure of its Scope 1 and Scope 2 emissions and to provide certain related disclosures about the service

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136 *See infra* Section II.A.2.

137 *See id*.

138 *See infra* Section II.F.

139 *See infra* Section II.K.

140 *See infra* Section II.L.

provider.[141] As proposed, both accelerated filers and large accelerated filers would have time to transition to the minimum attestation requirements. The proposed transition periods would provide existing accelerated filers and large accelerated filers one fiscal year to transition to providing limited assurance and two additional fiscal years to transition to providing reasonable assurance, starting with the respective compliance dates for Scopes 1 and 2 disclosure described below.[142] The proposed rules would provide minimum attestation report requirements, minimum standards for acceptable attestation frameworks, and would require an attestation service provider to meet certain minimum qualifications. The proposed rules would not require an attestation service provider to be a registered public accounting firm.

4. Phase-In Periods and Accommodations for the Proposed Disclosures

The proposed rules would include:

- A phase-in for all registrants, with the compliance date dependent on the registrant's filer status;
- An additional phase-in period for Scope 3 emissions disclosure;
- A safe harbor for Scope 3 emissions disclosure;
- An exemption from the Scope 3 emissions disclosure requirement for a registrant meeting the definition of a smaller reporting company ("SRC");[143] and

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[141] *See infra* Section II.H.

[142] *See infra* Section II.H.1 (providing further details on the proposed timing of the minimum attestation requirements).

[143] *See infra* Section II.G.3. The Commission's rules define a smaller reporting company to mean an issuer that is not an investment company, an asset-backed issuer, or a majority-owned subsidiary of a parent that is not a smaller reporting company and that: (1) had a public float of less than $250 million; or (2) had annual revenues of less than $100 million and either: (i) no public float; or (ii) a public float of less than $700 million. *See* 17 CFR 229.10(f)(1), 230.405, and 17 CFR 240.12b-2.

- A provision permitting a registrant, if actual reported data is not reasonably available, to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter, together with actual, determined GHG emissions data for the first three fiscal quarters, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.

The proposed rules would be phased in for all registrants, with the compliance date dependent upon the status of the registrant as a large accelerated filer, accelerated or non-accelerated filer, or SRC, and the content of the item of disclosure. For example, assuming that the effective date of the proposed rules occurs in December 2022 and that the registrant has a December 31st fiscal year-end, the compliance date for the proposed disclosures in annual reports, other than the Scope 3 disclosure, would be:

- For large accelerated filers, fiscal year 2023 (filed in 2024);
- For accelerated and non-accelerated filers, fiscal year 2024 (filed in 2025); and
- For SRCs, fiscal year 2025 (filed in 2026).[144]

Registrants subject to the proposed Scope 3 disclosure requirements would have one additional year to comply with those disclosure requirements.

We welcome feedback and encourage interested parties to submit comments on any or all aspects of the proposed rules. When commenting, it would be most helpful if you include the reasoning behind your position or recommendation.

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[144] *See infra* Section II.M.

II. DISCUSSION

A. Overview of the Climate-Related Disclosure Framework

1. Proposed TCFD-Based Disclosure Framework

We have modeled the proposed disclosure rules in part on the TCFD disclosure framework. Building on the TCFD framework should enable companies to leverage the framework with which many investors and issuers are already familiar, which should help to mitigate both the compliance burden for issuers and any burdens faced by investors in analyzing and comparing the new proposed disclosures.

Many commenters that supported climate disclosure rules recommended that we consider the TCFD framework in developing those rules. Numerous commenters stated that the Commission should base its climate-related disclosure rules on the TCFD framework either as a standalone framework,[145] or in conjunction with industry-specific metrics drawn from the

[145] *See, e.g.*, letters from Alphabet Inc., Amazon.com Inc., Autodesk, Inc., eBay Inc., Facebook, Inc., Intel Corporation, and Salesforce.com, Inc. (June 11, 2021) ("Alphabet Inc. *et al*.); the Aluminum Association (June 11, 2021); Amalgamated Bank; Apple, Inc.; Bank of Finland; BNP Paribas; Boston Common Asset Management; Ceres and other signatories representing NGOs, academics, and investors (Ceres *et al*.) (June 11, 2021); Certified B Corporations (June 11, 2021); Chevron; Clean Yield Asset Management; Climate Advisers (June 13, 2021); Climate Governance Initiative (June 12, 2021); Committee on Financial and Capital Markets (Keidenren) (June 13, 2021); Commonwealth Climate and Law Initiative; Crowe LLP (June 11, 2021); E2 (June 14, 2021); ERM CVS; Eumedion (June 11, 2021); Fossil Fuel Divest Harvard (June 14, 2021); Impact Investors, Inc.; Impax Asset Management; Information Technology Industry Council (June 11, 2021); Institutional Limited Partners Association (June 11, 2021); Japanese Bankers Association (June 11, 2021); Keramida (June 11, 2021); Carolyn Kohoot (June 11, 2021); Legal and General Investment Management America (June 11, 2021); Christopher Lish (June 12, 2021); Manifest Climate (June 13, 2021); Mercy Investment Services, Inc.; Miller/Howard Investments; Mirova US LLC (June 14, 2021); M.J. Bradley & Associates, on behalf of Energy Strategy Coalition (June 13, 2021); Morningstar, Inc. (June 9, 2021); MSCI, Inc.; Natural Resources Defense Council (June 11, 2021); Persefoni (June 14, 2021); PRI; S&P Global; Maria Stoica (June 11, 2021); Trillium Asset Management; United Nations Environment Programme (UNEP) (June 9, 2021); Walmart, Inc. (June 11, 2021); and World Business Council for Development (June 11, 2021) (WBCSD).

SASB[146] or other third-party frameworks.[147] A broad range of commenters, including both issuers[148] and investors,[149] supported basing new climate-related disclosure rules on the TCFD framework.

Commenters provided several reasons for their support of the TCFD framework. First, commenters indicated that, because of the widespread adoption of the framework, issuers and investors have experience making and using TCFD disclosures. As a result, according to commenters, aligning SEC rules with the TCFD could reduce the burden on issuers and increase

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146 *See, e.g.*, letters from Adobe Inc. (June 11, 2021); Alberta Investment Management Corporation (June 11, 2021); AllianceBernstein; American Chemistry Council (June 11, 2021); American Society of Adaptation Professionals (June 11, 2021); Baillie Gifford (June 11, 2021); Bank Policy Institute (June 9, 2021); BlackRock; Bloomberg, LP (June 3, 2021); bp; BSR (June 11, 2021); Canadian Bankers Association (June 11, 2021); Canadian Coalition of Good Governance; Capital Group (June 11, 2021); Catavento Consultancy (Apr. 30, 2021); Center for Climate and Energy Solutions; Confluence Philanthropy (June 14, 2021); ConocoPhilips, Inc. (June 11, 2021); CPP Investments (June 11, 2021); Enbridge, Inc. (June 11, 2021); Energy Workforce and Technology Council (June 11, 2021); Entelligent, Inc. (June 14, 2021); Ethic Inc.; Emmanuelle Haack (Apr. 27, 2021); Harvard Management Company (June 11, 2021); Hermes Equity Ownership Services Limited (June 14, 2021); Douglas Hileman Consulting (June 7, 2021); HP, Inc. (June 14, 2021); Virginia Harper Ho (June 12, 2021); IHS Markit (June 13, 2021); Institute of International Bankers; Institute of International Finance (June 13, 2021); Institute of Management Accountants (June 12, 2021); Invesco (June 10, 2021); Investment Company Institute; Investment Consultants Sustainability Working Group (June 11, 2021); Richard Love (May 20, 2021); Manulife Investment Management (June 11, 2021); NEI Investments (June 11, 2021); Neuberger Berman (June 11, 2021); New York State Society of Certified Public Accountants; Nordea Asset Management (June 11, 2021); Norges Bank Investment Management (June 13, 2021); NY State Comptroller; Paradice Investment Management (June 11, 2021); Parametric Portfolio Associates; PayPal Holdings, Inc. (June 12, 2021); PGIM (June 13, 2021); Reinsurance Association of America (June 9, 2021); Salesforce.com (June 11, 2021); San Francisco Employees Retirement System (June 12, 2021); State Street Global Advisors; Summit Strategy Group (June 11, 2021); Teachers Insurance and Annuity Association of America (June 11, 2021); T Rowe Price (June 11, 2021); Value Reporting Foundation (June 11, 2021); Wellington Management Co. (June 11, 2021); and Westpath Benefits and Assessments (June 11, 2021).

147 *See, e.g.*, letters from Gabrielle F. Preiser (Mar. 31, 2021) and Worldbenchmarking Alliance (June 11, 2021) (recommending the Global Reporting Initiative (GRI) standards); letter from Mathew Roling and Samantha Tirakian (June 11, 2021) (recommending the CDSB standards); and Pricewaterhouse Coopers and Grant Thornton (June 11, 2021) (recommending the Sustainability Standards Board (SSB) standards once the SSB is established by the IFRS Foundation and others as a global standard-setter and once it promulgates standards).

148 *See, e.g.*, letters from Adobe; Alphabet Inc. *et al*.; BNP Paribas; bp; Chevron; ConocoPhilips; and Walmart.

149 *See, e.g.*, letters from Alberta Investment Management Corporation; BlackRock; CalPERS; CALSTRS; Impact Investors, Inc.; and San Francisco Employees Retirement System.

the consistency and comparability of climate disclosures.[150] Second, commenters stated that the information that the TCFD disclosures elicit is useful for investors to understand companies' exposure to and management of climate-related risks.[151] Third, various jurisdictions around the world have announced their intention to align their domestic disclosure rules with the TCFD.[152] Commenters stated that by aligning with the TCFD framework, the Commission could potentially facilitate higher levels of consistency and comparability of disclosures globally.[153]

The consistency and breadth of these comments comport with our understanding that the TCFD framework has been widely accepted by issuers, investors, and other market participants and reinforce our view that the framework would provide an appropriate foundation for the proposed amendments.[154] Basing the Commission's climate-related disclosure rules on a globally recognized framework should help elicit climate-related disclosures that are consistent,

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150 *See, e.g.*, letters from BNP Paribas; Deutsche Bank (June 11, 2021); and Institute of International Bankers.

151 *See, e.g.*, letters from AllianceBernstein; CALSTRS; Investment Company Institute; and NY State Comptroller.

152 *See supra* note 95 and accompanying text.

153 *See, e.g.*, letters from BNP Paribas; bp; and Chevron.

154 Proponents of the TCFD framework include academics (*see, e.g.*, letters from Jill Fisch *et al*., J. Robert Gibson (May 26, 2021), and Gina-Gail S Fletcher (June 14, 2021)); accounting and audit firms (*see, e.g.*, letters from AICPA (June 11, 2021), Center for Audit Quality ("CAQ") (June 11, 2021), and KPMG LLP (June 12, 2021)); foreign firms (*see, e.g.*, letters from Bank of Finland, BNP Paribas, bp, and Deutsche Bank); industry groups (*see, e.g.*, letters from American Chemistry Council, Association of American Railroads (June 11, 2021), and Information Technology Industry Council (June 11, 2021)); investor groups (*see, e.g.*, letters from CalPERS; CALSTRS; and San Francisco Employees Retirement System); individuals (*see, e.g.*, letters from Emmanuelle Haack, Christopher Lish, and Maria Stoica); issuers (*see, e.g.*, letters from Adobe, Alphabet Inc. *et al*., Apple, and Chevron); NGOs (*see, e.g.*, letters from Ceres *et al*., Climate Governance Initiative, Natural Resources Defense Council, and UNEP); professional climate advisors (*see, e.g.*, letters from Catavento Consultancy, Douglas Hileman Consulting, ERM CVS, and Ethic Inc.); and professional investment advisors/investment management companies (*see, e.g.*, letters from AllianceBernstein, Impact Investors, Miller/Howard Investments, and Neuberger Berman).

comparable, and reliable while also limiting the compliance burden for registrants that are already providing climate-related disclosures based on this framework.

Similar to the TCFD framework, the proposed climate-related provisions under Regulation S-K would require disclosure of a registrant's: governance of climate-related risks;[155] any material climate-related impacts on its strategy, business model, and outlook;[156] climate-related risk management;[157] GHG emissions metrics;[158] and climate-related targets and goals, if any.[159]

The proposed climate-related provisions under Regulation S-X would require a registrant to disclose in a note to its financial statements certain disaggregated climate-related financial statement metrics that are mainly derived from existing financial statement line items.[160] The proposed rules would require disclosure falling under the following three categories of information: financial impact metrics;[161] expenditure metrics;[162] and financial estimates and assumptions.[163] Similar to the TCFD's recommendation regarding financial impacts, the proposed financial statement metrics have the objective of increasing transparency about how

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155 *See* proposed 17 CFR 229.1501.

156 *See* proposed 17 CFR 229.1502.

157 *See* proposed 17 CFR 229.1503.

158 *See* proposed 17 CFR 229.1504.

159 *See* proposed 17 CFR 229.1506.

160 *See* proposed 17 CFR 210.14-01 and 14-02.

161 *See* proposed 17 CFR 210.14-02(c) and (d).

162 *See* proposed 17 CFR 210.14-02(e) and (f).

163 *See* proposed 17 CFR 210.14-02(g) and (h).

climate-related risks impact a registrant's financial statements.[164] The TCFD framework identifies two broad categories of actual and potential financial impacts driven by climate-related risks and opportunities: financial performance (income statement focused) and financial position (balance sheet focused), and includes suggested metrics such as the amount of capital expenditure deployed toward climate-related risks and opportunities, which is similar to our proposed financial statement metrics.[165]

2. Location of the Climate-Related Disclosure

Many commenters stated that the Commission should amend Regulation S-K or Regulation S-X to include climate-related disclosure requirements.[166] Other commenters recommended that the Commission adopt a new stand-alone regulation for climate-related

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164 *See* TCFD, *Recommendations of the Task Force on Climate-related Financial Disclosures* (June 2017), Section B.3 (Financial Impacts).

165 *See* TCFD, Guidance on Metrics, Targets, and Transition Plans (Oct. 2021), Section F (Financial Impacts), *available at* https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf. For avoidance of doubt, disclosure of climate-related opportunities is optional, not required, under our proposal.

166 *See, e.g.*, letters from AllianceBernstein; American Society of Adaptation Professionals; Seema Arora (June 22, 2021); Associated General Contractors of America (June 11, 2021); Baillie Gifford; CalPERS; Cardano Risk Management Ltd. (Apr. 19, 2021); Center for American Progress; Ceres *et al*.; Eni SpA; Jill Fisch (June 3, 2021); George S. Georgiev (June 22, 2021); Hannon Armstrong (June 15, 2021); Henry Schein, Inc.; Hermes Equity Ownership Services Limited; Virginia Harper Ho; Institute for Governance and Sustainable Development (June 9, 2021); Institute for Market Transformation (June 12, 2021); Interfaith Center on Corporate Responsibility; International Corporate Governance Network (June 11, 2021); Japanese Bankers Association; Morrison & Foerster LLP; National Investor Relations Institute (June 11, 2021); Natural Resources Defense Council; Newmont Corporation (June 13, 2021); New York State Society of Certified Public Accountants; NY State Comptroller; PayPal Holdings, Inc.; PRI (Consultation Response); PricewaterhouseCoopers LLP; Maria Stoica; Sunrise Bay Area (June 14, 2021); Teachers Insurance and Annuity Association of America; Vert Asset Management LLC (June 14, 2021); WBCSD; and Wespath Benefits and Investments (June 11, 2021).

disclosure.[167] We are proposing to include the climate-related disclosure rules in Regulation S-K and Regulation S-X because the required disclosure is fundamental to investors' understanding the nature of a registrant's business and its operating prospects and financial performance, and therefore, should be presented together with other disclosure about the registrant's business and its financial condition.

Specifically, we are proposing to require a registrant to include climate-related disclosure in Securities Act or Exchange Act registration statements and Exchange Act annual reports in a separately captioned "Climate-Related Disclosure" section and in the financial statements.[168] Requiring climate-related disclosure to be presented in this manner would facilitate review of the climate-related disclosure by investors alongside other relevant company financial and non-financial information.

A registrant would be able to incorporate by reference disclosure from other parts of the registration statement or annual report (*e.g.*, Risk Factors, MD&A, or the financial statements) or, in most cases, from other filed or submitted reports into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500-1506 of Regulation S-K and if the registrant satisfies the incorporation by reference requirements under the Commission's rules and forms.[169] Allowing incorporation by reference for the Regulation S-K climate-related disclosure

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[167] *See* letters from Bank Policy Institute; Andrew Behar (As You Sow) (June 14, 2021); Entelligent Inc. (June 14, 2021); Impax Asset Management; Information Technology Industry Council; Majedie Asset Management (May 25, 2021); David Marriage (June 15, 2021); and XBRL US (June 15, 2021).

[168] *See infra* Section II.J for a discussion of the registrants and forms to which the proposed rules would apply.

[169] *See* 17 CFR 230.411; 17 CFR 240.12b-23; and the applicable forms.

would be consistent with the treatment of other types of business disclosure under our rules and would provide some flexibility for registrants while reducing redundancy in disclosure.[170]

Many commenters stated that the Commission should require registrants to discuss and analyze their quantitative climate data in a manner similar to that required for MD&A.[171] These commenters stressed the importance of placing climate-related metrics in the context of other company financial and non-financial information to enable investors to see how those metrics intersect with business operations and industrial processes.[172] Other commenters supported a requirement to discuss and analyze the climate-related metrics, but stated that such discussion should be part of the existing MD&A disclosures.[173] We agree with the commenters supporting a narrative discussion and analysis of the climate-related metrics as means to present these disclosures in context and explain how they relate to the registrant's strategy and management of its climate-related risks. In this way, such a discussion will serve a similar function to the MD&A but will focus on climate-related risk specifically. Our proposed approach, which

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[170] A registrant that elects to incorporate by reference any of the metrics or narrative disclosure that is subject to XBRL tagging must comply with the electronic tagging requirement in the section of the registration statement or report where the metrics or narrative disclosure appears in full. We discuss the XBRL tagging requirement in Section II.K.

[171] *See, e.g.*, letters from Acadian Asset Management LLC (June 14, 2021); Actual Systems, Inc. (June 11, 2021); Baillie Gifford; Biotechnology Innovation Organization; CDP; ClientEarth US (June 14, 2021); FAIRR Initiative (June 15, 2021); Jill Fisch (June 3, 2021); Hermes Equity Ownership Services Limited; International Corporate Governance Network; Japanese Bankers Association; Majedie Asset Management; Morningstar, Inc.; NEI Investments; NY State Comptroller; Paradice Investment Management; Pre-Distribution Initiative (June 14, 2021); PricewaterhouseCoopers LLP; Matthew Roling and Samantha Tirakian (June 11, 2021); Terra Alpha Investments; Vert Asset Management; and WBCSD.

[172] *See, e.g.*, letters from Pricewaterhouse Coopers Ltd.; Vert Asset Management; and WBCSD.

[173] *See, e.g.*, letters from Canadian Coalition for Good Governance; Clean Production Action and Environmental Health Network (June 11, 2021); Decatur Capital Management; Dimensional Fund Advisors (June 11, 2021); Environmental Industry Group (June 9, 2021); Institute for Governance and Sustainable Development; PRI (Consultation Response); Kenya Rothstein (May 3, 2021); and Maria Stoica. *But see* letter from Sarah Ladin (June 14, 2021) (doubting that a "sustainability discussion and analysis" requirement would achieve the desired results and stating that it would be difficult to enforce); and David Marriage (indicating that a discussion and analysis requirement for climate-related data would make the data difficult for the market to absorb).

requires the climate-related disclosure to be included in a specific section but allows registrants to incorporate from disclosure elsewhere (consistent with applicable incorporation by reference requirements), provides some flexibility to the proposed climate-related disclosure scheme while ensuring the disclosure is consistent and comparable across registrants.

Request for Comment

1. Should we add a new subpart to Regulation S-K and a new article to Regulation S-X that would require a registrant to disclose certain climate-related information, as proposed? Would including the climate-related disclosure in Regulation S-K and Regulation S-X facilitate the presentation of climate information as part of a registrant's regular business reporting? Should we instead place the climate-related disclosure requirements in a new regulation or report? Are there certain proposed provisions, such as GHG emissions disclosure requirements, that would be more appropriate under Regulation S-X than Regulation S-K?

2. If adopted, how will investors utilize the disclosures contemplated in this release to assess climate-related risks? How will investors use the information to assess the physical effects and related financial impacts from climate-related events? How will investors use the information to assess risks associated with a transition to a lower carbon economy?

3. Should we model the Commission's climate-related disclosure framework in part on the framework recommended by the TCFD, as proposed? Would alignment with the TCFD help elicit climate-related disclosures that are consistent, comparable, and reliable for investors? Would alignment with the TCFD framework help mitigate the reporting burden for issuers and facilitate understanding of climate-related information by investors because the framework is widely used by companies in the United States and around the world? Are there aspects of the TCFD framework that we should not adopt? Should we instead adopt rules that are based on a

different third-party framework? If so, which framework? Should we base the rules on something other than an existing third-party framework?

4. Do our current reporting requirements yield adequate and sufficient information regarding climate-related risks to allow investors to make informed decisions? In lieu of, or in addition to the proposed amendments, should we provide updated guidance on how our existing rules may elicit better disclosure about climate-related risks?

5. Should we require a registrant to present the climate-related disclosure in an appropriately captioned, separate part of the registration statement or annual report, as proposed? Should this disclosure instead be presented as part of the registrant's MD&A?

6. Should we permit a registrant to incorporate by reference some of the climate-related disclosure from other parts of the registration statement or annual report, as proposed? Should we permit a registrant to incorporate by reference climate-related disclosure that appears in a sustainability report if the registrant includes the incorporated by referenced disclosure as an exhibit to the registration statement or annual report? Are there some climate-related disclosure items, such as GHG emissions data, that we should not permit a registrant to incorporate by reference? Would requiring a registrant to include all of the proposed climate-related disclosures in a separate, appropriately captioned section, while precluding a registrant from incorporating by reference some or all of the climate-related disclosures, promote comparability and ease of use of the climate-related information for investors?

7. Should we permit a registrant to provide certain of the proposed climate-related disclosures in Commission filings other than the annual report or registration statement? For example, should we permit a registrant to provide information about board and management oversight of climate-related risks in its proxy statement?

B. Disclosure of Climate-Related Risks

As many commenters have noted when seeking more detailed climate-related disclosures,[174] climate events and contingencies can pose financial risks to issuers across industrial sectors.[175] Physical risks may include harm to businesses and their assets arising from acute climate-related disasters such as wildfires, hurricanes, tornadoes, floods, and heatwaves. Companies and their investors may also face chronic risks and more gradual impacts from long-term temperature increases, drought, and sea level rise.

In addition to the physical risks associated with the climate, issuers and investors may also face risks associated with a potential transition to a less carbon intensive economy. These risks may arise from potential adoption of climate-related regulatory policies including those that may be necessary to achieve the national climate goals that may be or have been adopted in the United States and other countries;[176] climate-related litigation; changing consumer, investor, and

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[174] *See supra* note 40.

[175] The 2020 CFTC Advisory Subcommittee Report found that climate change currently impacts or is expected to affect every part of the U.S. economy, including agriculture, real estate, infrastructure, and the financial sectors. *See infra* note 361.

[176] A National Climate Taskforce created by the president established commitments to reduce economy-wide net greenhouse gas emissions by 50-52% by 2030 as compared to 2005 levels, and to reach net zero emissions by 2050. *See* The White House, FACT SHEET: *President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies* (Apr. 22, 2021). An Executive Order also directs the Federal government to achieve net-zero emissions from overall Federal operations by 2050, and a 65% emissions reduction by 2030. *See* The White House, FACT SHEET: *President Biden Signs Executive Order Catalyzing America's Clean Energy Economy Through Federal Sustainability* (Dec. 8, 2021), at https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/08/fact-sheet-president-biden-signs-executive-order-catalyzing-americas-clean-energy-economy-through-federal-sustainability/. A growing number of governments and companies have made net zero commitments or announced similar carbon-reduction goals or targets. *See* United Nations Climate Change, *Commitments to Net Zero Double in Less Than a Year* (Sept. 21, 2020), available at https://unfccc.int/news/commitments-to-net-zero-double-in-less-than-a-year.

employee behavior and choices; changing demands of business partners; long-term shifts in market prices; technological challenges and opportunities, and other transitional impacts. Disclosure about a registrant's exposure to transition risks, as well as how the registrant is assessing and managing those risks, would help investors assess and plan for how the registrant would be financially impacted by a transition to a lower-carbon economy.

1. Definitions of Climate-Related Risks and Climate-Related Opportunities

A central focus of the Commission's proposed rules is the identification and disclosure of a registrant's material climate-related risks. The proposed rules would require a registrant to disclose any climate-related risks reasonably likely to have a material impact on the registrant's business or consolidated financial statements.[177] A registrant may also disclose, as applicable, the actual and potential impacts of any climate-related opportunities it is pursuing.[178] The proposed definitions are substantially similar to the TCFD's definitions of climate-related risks and climate-related opportunities.[179] We have based our definitions on the TCFD's definitions because they provide a common terminology that allows registrants to disclose climate-related risks and opportunities in a consistent and comparable way. Grounding our definitions in a framework that is already widely accepted also could help limit the burden on issuers to identify and describe climate-related risks and improve the comparability and usefulness of the disclosures for investors.

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177 *See* proposed 17 CFR 229.1502(a).

178 *See id*.

179 *See* TCFD, *Recommendations of the Task Force on Climate-related Financial Disclosures*, Appendix 5.

As proposed, "climate-related risks" means the actual or potential negative impacts of climate-related conditions and events on a registrant's consolidated financial statements, business operations, or value chains, as a whole.[180] "Value chain" would mean the upstream and downstream activities related to a registrant's operations.[181] Under the proposed definition, upstream activities include activities by a party other than the registrant that relate to the initial stages of a registrant's production of a good or service (*e.g.*, materials sourcing, materials processing, and supplier activities). Downstream activities would be defined to include activities by a party other than the registrant that relate to processing materials into a finished product and delivering it or providing a service to the end user (*e.g.*, transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments).[182] We have proposed including a registrant's value chain within the definition of climate-related risks to capture the full extent of a registrant's potential exposure to climate-related risks, which can extend beyond its own operations to those of its suppliers, distributors, and others engaged in upstream or downstream activities.[183]

Climate-related conditions and events can present risks related to the physical impacts of the climate ("physical risks") and risks related to a potential transition to a lower carbon

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[180] *See* proposed 17 CFR 229.1500(c). The reference to 'negative' impact is intended to refer to the actual or potential impact on the registrant's consolidated financial statements, business operations, or value chains as a whole, rather than the mathematical impacts on a specific financial statement line item. *See infra* Section II.F.2 (discussing the proposed financial impact metrics, which focus on the line items in a registrant's consolidated financial statements).

[181] *See* proposed 17 CFR 229.1500(t).

[182] *See id*.

[183] *See, e.g.*, *infra* Section II.G.1.

economy ("transition risks"). As proposed, "physical risks" is defined to include both acute and chronic risks to a registrant's business operations or the operations of those with whom it does business.[184] "Acute risks" is defined as event-driven risks related to shorter-term extreme weather events, such as hurricanes, floods, and tornadoes.[185] "Chronic risks" is defined as those risks that the business may face as a result of longer term weather patterns and related effects, such as sustained higher temperatures, sea level rise, drought, and increased wildfires, as well as related effects such as decreased arability of farmland, decreased habitability of land, and decreased availability of fresh water.[186] Many of these physical risks have already impacted and may continue to impact registrants across a wide range of economic sectors.[187]

The proposed rules would define transition risks to mean the actual or potential negative impacts on a registrant's consolidated financial statements, business operations, or value chains attributable to regulatory, technological, and market changes to address the mitigation of, or adaptation to, climate-related risks.[188] Transition risks would include, but are not limited to, increased costs attributable to climate-related changes in law or policy, reduced market demand for carbon-intensive products leading to decreased sales, prices, or profits for such products, the

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[184] *See* proposed 17 CFR 229.1500(c)(1).

[185] *See* proposed 17 CFR 229.1500(c)(2).

[186] *See* proposed 17 CFR 229.1500(c)(3). The physical risks described are examples, but registrants may be exposed to many other types of physical risks from climate change depending on their specific facts and circumstances. As such, any reference to certain types of risks should be considered as non-exhaustive examples.

[187] The IPCC's Sixth Assessment Report noted drought, heatwaves, hurricanes, and heavy precipitation. *See* IPCC, *Climate Change 2021, The Physical Science Basis Summary for Policymakers*.

[188] *See* proposed 17 CFR 229.1500(c)(4).

devaluation or abandonment of assets, risk of legal liability and litigation defense costs, competitive pressures associated with the adoption of new technologies, reputational impacts (including those stemming from a registrant's customers or business counterparties) that might trigger changes to market behavior, changes in consumer preferences or behavior, or changes in a registrant's behavior. A registrant that has significant operations in a jurisdiction that has made a GHG emissions reduction commitment would likely be exposed to transition risks related to the implementation of the commitment.[189]

The proposed rules would require a registrant to specify whether an identified climate-related risk is a physical or transition risk so that investors can better understand the nature of the risk[190] and the registrant's actions or plan to mitigate or adapt to the risk.[191] If a physical risk, the proposed rules would require a registrant to describe the nature of the risk, including whether it may be categorized as an acute or chronic risk.[192]

The proposed rules would require a registrant to include in its description of an identified physical risk the location of the properties, processes, or operations subject to the physical risk.[193] The proposed location disclosure would only be required for a physical risk that a registrant has determined has had or is likely to have a material impact on its business or

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[189] *See* proposed 17 CFR 229.1502(a)(1)(ii).

[190] *See* proposed 17 CFR 229.1502(a)(1).

[191] *See, e.g.*, proposed 17 CFR 229.1502(b)(1) and 229.1503(c)(1) and (2).

[192] *See* proposed 17 CFR 229.1502(a)(1)(i). In some instances, chronic risks might give rise to acute risks. For example, drought (a chronic risk) that increases acute risks, such as wildfires, or increased temperatures (a chronic risk) that increases acute risks, such as severe storms. In such instances, a registrant should provide a clear and consistent description of the nature of the risk and how it may affect a related risk.

[193] *See id*.

consolidated financial statements. In such instances, a registrant would be required to provide the ZIP code for the location or, if the location is in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location.[194] Because physical risks can be concentrated in particular geographic areas, the proposed disclosure would allow investors to better assess the risk exposure of one or more registrants with properties or operations in a particular area. One commenter cited location information as a key component of how it, as an investor, assesses the climate risk facing a company, particularly for companies with fixed assets that may be disproportionately exposed to climate-related physical risks.[195] Several other commenters recommended that we require the disclosure of certain climate data to be disaggregated by location using a point source's zip code for risk assessment.[196] Disclosing the zip codes of its identified material climate-related risks, rather than a broader location designation, could help investors more accurately assess a registrant's specific risk exposure.

Some registrants might be exposed to water-related acute physical risks, such as flooding, which could impair a registrant's operations or devalue its property. If flooding presents a material physical risk, the proposed rules would require a registrant to disclose the percentage of buildings, plants, or properties (square meters or acres) that are located in flood hazard areas in addition to their location.[197] This information could help investors evaluate the magnitude of a

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[194] *See* proposed 17 CFR 229.1500(k).

[195] *See* letter from Wellington Management Co.

[196] *See* letters from Action Center on Race and Economy (June 14, 2021); Americans for Financial Reform Education Fund; Confluence Philanthropy; Domini Impact Investments; William and Flora Hewlett Foundation; Public Citizen; and Revolving Door Project.

[197] *See* proposed 17 CFR 229.1502(a)(1)(i)(A).

registrant's exposure to flooding, which, for example, could cause a registrant in the real estate sector to lose revenues from the rental or sale of coastal property or incur higher costs or a diminished ability to obtain property insurance, or a manufacturing registrant to incur increased expenses due to the need to replace water-damaged equipment or move an entire plant.

Additional disclosure would be required if a material risk concerns the location of assets in regions of high or extremely high water stress.[198] For example, some registrants might be impacted by water-related chronic physical risks, such as increased temperatures and changes in weather patterns that result in water scarcity. Registrants that are heavily reliant on water for their operations, such as registrants in the energy sector, materials and buildings sector, or agriculture sector,[199] could face regulatory restrictions on water use, increased expenses related to the acquisition and purchase of alternative sources of water, or curtailment of its operations due to a reduced water supply that diminishes its earning capacity. If the location of assets in regions of high or extremely high water stress presents a material risk, the proposed rules would require a registrant to disclose the amount of assets (*e.g.*, book value and as a percentage of total assets) located in such regions in addition to their location. The registrant would also be required to disclose the percentage of its total water usage from water withdrawn in those regions.[200] These disclosures could help investors understand the magnitude of a registrant's material water-

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[198] *See* proposed 1502(a)(1)(i)(B).

[199] Registrants in these industry sectors could be particularly susceptible to water-stress risks because operations in these sectors require large amounts of water. *See* TCFD, *Implementing the Recommendations of the Task Force on Climate-Related Financial Disclosures*, Section E (Oct. 2021), available at https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Implementing_Guidance.pdf (discussing the listed events and other risks).

[200] *See* proposed 17 CFR 229.1502(a)(1)(i)(B).

stress risks with a degree of specificity that might not be elicited under our current risk factor disclosure standards.

Any increased temperatures could also materially impact a registrant in other ways. For example, a registrant in the construction industry might be required to disclose the physical risk of increased heat waves that affect the ability of its personnel to safely work outdoors, which could result in a cessation or delay of operations, and a reduction in its current or future earnings.[201] A registrant operating in wildfire-prone areas could be exposed to potential disruption of operations, destruction of property, and relocation of personnel in the event of heat-induced wildfires.[202] A registrant in the real estate sector might similarly be required to disclose the likelihood that sea levels could rise faster than expected and reduce the value of its coastal properties.[203]

The proposed rules would require a registrant to describe the nature of transition risks, including whether they relate to regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors, and how those factors impact the registrant.[204] For example, an automobile manufacturer might describe how market factors, such as changing consumer and investor preferences for low-emission vehicles, have impacted or will likely impact its production choices, operational capabilities, and future expenditures. An energy producer might describe

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201 *See, e.g.* How Seasonal Temperature Changes Affect the Construction Industry (constructconnect.com) (Aug. 15, 2018), available at https://www.constructconnect.com/blog/seasonal-temperature-changes-affect-construction-industry.

202 *See, e.g.*, The Impact of Wildfires on Business is Enormous | Are You Ready? (alertmedia.com) (Aug. 27, 2020), available at https://www.alertmedia.com/blog/the-impact-of-wildfires-on-business/.

203 *See, e.g.*, Climate change and the coming coastal real estate crash - Curbed (Oct. 16, 2018), available at https://archive.curbed.com/2018/10/16/17981244/real-estate-climate-change-infrastructure.

204 *See* proposed 17 CFR 229.1502(a)(1)(ii).

how regulatory and reputational factors have impacted or are likely to impact its operational activities, reserve valuations, and investments in renewable energy. An industrial manufacturer might describe how investments in innovative technologies, such as carbon capture and storage, have impacted or are likely to impact its consolidated financial statements, such as by increasing its capital expenditures.

Climate related conditions and any transition to a lower carbon economy may also present opportunities for companies and investors. The proposed rules would define "climate-related opportunities" to mean the actual or potential positive impacts of climate-related conditions and events on a registrant's consolidated financial statements, business operations, or value chains, as a whole.[205] Efforts to mitigate or adapt to the effects of climate-related conditions and events can produce opportunities, such as cost savings associated with the increased use of renewable energy, increased resource efficiency, the development of new products, services, and methods, access to new markets caused by the transition to a lower carbon economy, and increased resilience along a registrant's supply or distribution network related to potential climate-related regulatory or market constraints. A registrant, at its option, may disclose information about any climate-related opportunities it may be pursuing when responding to the proposed disclosure requirements concerning governance, strategy, and risk management in connection with climate-related risks. We are proposing to treat this disclosure

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[205] *See* proposed 17 CFR 229.1500(b). The reference to 'positive' impact is intended to refer to the actual or potential impact on the registrant's consolidated financial statements, business operations, or value chains as a whole, rather than the mathematical impacts on a specific financial statement line item. *See infra* Section II.F.2 (discussing the proposed financial impact metrics, which focus on the line items in a registrant's consolidated financial statements).

as optional to allay any anti-competitive concerns that might arise from a requirement to disclose a particular business opportunity.[206] By defining "climate-related opportunities," the proposed rules would promote consistency when such opportunities are disclosed, even if such disclosure is not required.

2. Proposed Time Horizons and the Materiality Determination

The proposed rules would require a registrant to disclose whether any climate-related risk is reasonably likely to have a material impact on a registrant, including its business or consolidated financial statements, which may manifest over the short, medium, and long term.[207] Several commenters made a similar recommendation, stating that disclosure of climate-related risks and impacts across short, medium, and long-term time horizons is necessary to fully understand a registrant's susceptibility to material climate-related risks.[208]

As proposed, a registrant would be required to describe how it defines short-, medium-, and long-term time horizons, including how it takes into account or reassesses the expected useful life of the registrant's assets and the time horizons for the registrant's planning processes and goals. We have not proposed a specific range of years to define short-, medium-, and long-

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[206] Some commenters expressed concern about potential anti-competitive effects of the Commission's possible climate disclosure rules. *See, e.g.*, letters from Association of General Contractors of America (June 11, 2021); and Healthy Markets Association (June 14, 2021).

[207] *See* proposed Item 1502(a) of Regulation S-K.

[208] *See, e.g.*, letters from Boston Common Asset Management; Christian Brothers Investment Services (June 11, 2021); Clean Yield Asset Management; and Miller/Howard Investments; *see also* American Institute of CPAs (AICPA) (June 11, 2021).

term time horizons in order to allow flexibility for a registrant to select the time horizons that are most appropriate to its particular circumstances.

As defined by the Commission and consistent with Supreme Court precedent, a matter is material if there is a substantial likelihood that a reasonable investor would consider it important when determining whether to buy or sell securities or how to vote.[209] As the Commission has previously indicated, the materiality determination is largely fact specific and one that requires both quantitative and qualitative considerations.[210] Moreover, as the Supreme Court has articulated, the materiality determination with regard to potential future events requires an assessment of both the probability of the event occurring and its potential magnitude, or significance to the registrant.[211]

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[209] *See* 17 CFR 240.12b-2 (definition of "material"). *See also Basic Inc. v. Levinson*, 485 U.S. 224, 231, 232, and 240 (1988) (holding that information is material if there is a substantial likelihood that a reasonable investor would consider the information important in deciding how to vote or make an investment decision; and quoting *TSC Industries, Inc. v. Northway, Inc*., 426 U. S. 438, 449 (1977) to further explain that an omitted fact is material if there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available.").

[210] *See* Release No. 33-10064, *Business and Financial Disclosure Required by Regulation S-K* (Apr. 13, 2016), [81 FR 23915 (Apr. 22, 2016)] (discussing materiality in the context of, among other matters, restating financial statements). See also Staff Accounting Bulletin No. 99 (Aug. 12, 1999), available at https://www.sec.gov/interps/account/sab99.htm (emphasizing that a registrant or an auditor may not substitute a percentage threshold for a materiality determination that is required by applicable accounting principles). Staff accounting bulletins are not rules or interpretations of the Commission, nor are they published as bearing the Commission's official approval. They represent interpretations and practices followed by the Division of Corporation Finance and the Office of the Chief Accountant in administering the disclosure requirements of the Federal securities laws.

[211] *See Basic, Inc. v. Levinson*, 485 U.S. 224, 238 (1988). When considering the materiality of different climate-related risks, a registrant might, for example, determine that certain transition risks and chronic physical risks are material when balancing their likelihood and impact. It also might determine that certain acute physical risks are material even if they are less likely to occur if the magnitude of their impact would be high.

The materiality determination that a registrant would be required to make regarding climate-related risks under the proposed rules is similar to what is required when preparing the MD&A section in a registration statement or annual report. The Commission's rules require a registrant to disclose material events and uncertainties known to management that are reasonably likely to cause reported financial information not to be necessarily indicative of future operating results or of future financial condition.[212] As the Commission has stated, MD&A should include descriptions and amounts of matters that have had a material impact on reported operations as well as matters that are reasonably likely to have a material impact on future operations.[213]

The proposed rule serves to emphasize that, when assessing the materiality of a particular risk, management should consider its magnitude and probability over the short, medium, and long term. In the context of climate, the magnitude and probability of such risks vary and can be significant over such time periods. For example, wildfires in California, which recently have become more frequent and more intense, may be a material risk for wineries, farmers, and other property owners.[214] Some insurance companies have withdrawn from certain wildfire prone areas after concluding the risk is no longer insurable.[215] For many investors, the availability of

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212 *See* 17 CFR 229.303(a).

213 See Release No. 33-10890, *Management's Discussion and Analysis, Selected Financial Data, and Supplementary Financial Information* (Nov. 19, 2020), [86 FR 2080, 2089 (Jan. 11, 2021)].

214 *See, e.g.,* Daoping Wang, Dabo Guan, Shupeng Zhu, *et al*., *Economic footprint of California wildfires in 2018*, Nature Sustainability (Dec. 2020) (stating that the frequency and size of wildfires in the western United States has been increasing for several decades, driven by decreases in precipitation and related changes in the moisture in vegetation, which, together with land use and fire management practices, has dramatically increased wildfire risks, culminating in a series of enormously damaging fires in California in 2017, 2018 and 2020); Andrew Freedman, *California wildfires prompt new warnings amid record heat, erratic winds*, the Washington Post (Oct. 1, 2020) (reporting that the "Glass Fire" forced about 80,000 to evacuate from Napa and Sonoma Counties and took a heavy toll on the wine industry).

215 *See* Shelby Vittek, *California Farmers Struggle to Secure Wildfire Insurance Coverage*, Modern Farmer (Aug. 2, 2021), available at https://modernfarmer.com/2021/08/california-farmers-struggle-to-secure-wildfire-insurance-coverage/

insurance and the potential exposure to damage, loss, and legal liability from wildfires may be a determining factor in their investment decision-making. Moreover, registrants must bear in mind that the materiality determination is made with regard to the information that a reasonable investor considers important to an investment or voting decision.

To help ensure that management considers the dynamic nature of climate-related risks, we are proposing to require a registrant to discuss its assessment of the materiality of climate-related risks over the short, medium, and long term. We recognize that determining the likely future impacts on a registrant's business may be difficult for some registrants. Commenters have noted that the science of climate modelling has progressed in recent years and enabled the development of various software tools and that climate consulting firms are available to assist registrants in making this determination.[216] We also note that, under our existing rules, registrants long have had to disclose forward-looking information, including pursuant to MD&A requirements. To the extent that the proposed climate-related disclosures constitute forward-looking statements, as discussed below,[217] the forward-looking statement safe harbors pursuant to the Private Securities Litigation Reform Act ("PSLRA")[218] would apply, assuming the conditions specified in those safe harbor provisions are met.[219] We note, however, that there are

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216 *See, e.g.*, letters from AIR Worldwide (June 11, 2021); Coastal Risk Consulting (May 3, 2021); CoreLogic (June 12, 2021); Datamaran (June 14, 2021); Dynamhex, Inc. (June 15, 2021); EC-Map (June 12, 2021); FutureProof Technologies, Inc. (June 7, 2021); and right.based on science GmbH (June 12, 2021).

217 *See, e.g., infra* Sections II.C.4 and II.I.

218 Pub. Law 104-67, 109 Stat. 737.

219 *See* Securities Act Section 27A and Exchange Act Section 21E. The statutory safe harbors by their terms do not apply to forward-looking statements included in financial statements prepared in accordance with generally accepted accounting principles ("GAAP"). The statutory safe harbors also would not apply to forward-looking statements made: (i) in connection with an initial public offering; a tender offer; an offering by, or relating to

important limitations to the PSLRA safe harbor. For example, we are proposing that climate-related disclosures would be required in registration statements, including those for initial public offerings, and forward-looking statements made in connection with an initial public offering are excluded from the protections afforded by the PSLRA. In addition, the PSLRA does not limit the Commission's ability to bring enforcement actions.

Request for Comment

8. Should we require a registrant to disclose any climate-related risks that are reasonably likely to have a material impact on the registrant, including on its business or consolidated financial statements, which may manifest over the short, medium, and long term, as proposed? If so, should we specify a particular time period, or minimum or maximum range of years, for "short," "medium," and "long term?" For example, should we define short term as 1 year, 1-3 years, or 1-5 years? Should we define medium term as 5-10 years, 5-15 years, or 5-20 years? Should we define long-term as 10-20 years, 20-30 years, or 30-50 years? Are there other possible years or ranges of years that we should consider as the definitions of short, medium, and long term? What, if any, are the benefits to leaving those terms undefined? What, if any, are the concerns to leaving those terms undefined? Would the proposed provision requiring a registrant to specify what it means by the short, medium, and long term mitigate any such concerns?

9. Should we define "climate-related risks" to mean the actual or potential negative impacts of climate-related conditions and events on a registrant's consolidated financial statements,

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the operations of, a partnership, limited liability company, or a direct participation investment program, an offering of securities by a blank check company; a roll-up transaction; or a going private transaction; or (ii) by an issuer of penny stock. *See* Section 27A(b) of the Securities Act and Section 21E(b) of the Exchange Act. Also, the statutory safe harbors do not, absent a rule, regulation, or Commission order, apply to forward-looking statements by certain "bad actor" issuers under Section 27A(b)(1)(A) of the Securities Act and Section 21E(b)(1)(A) of the Exchange Act.

business operations, or value chains, as proposed? Should we define climate-related risks to include both physical and transition risks, as proposed? Should we define physical risks to include both acute and chronic risks and define each of those risks, as proposed? Should we define transition risks, as proposed? Are there any aspects of the definitions of climate-related risks, physical risks, acute risks, chronic risks, and transition risks that we should revise? Are there other distinctions among types of climate-related risks that we should use in our definitions? Are there any risks that we should add to the definition of transition risk? How should we address risks that may involve both physical and transition risks?

10. We define transition risks to include legal liability, litigation, or reputational risks. Should we provide more examples about these types of risks? Should we require more specific disclosures about how a registrant assesses and manages material legal liability, litigation, or reputational risks that may arise from a registrant's business operations, climate mitigation efforts, or transition activities?

11. Some chronic risks might give rise to acute risks, *e.g.*, drought (a chronic risk) that increases acute risks, such as wildfires, or increased temperatures (a chronic risk) that increases acute risks, such as severe storms. Should we require a registrant to discuss how the acute and chronic risks they face may affect one another?

12. For the location of its business operations, properties or processes subject to an identified material physical risk, should we require a registrant to provide the ZIP code of the location or, if located in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location, as proposed? Is there another location identifier that we should use for all registrants, such as the county, province, municipality or other subnational jurisdiction? Would requiring granular location information, such as ZIP codes, present concerns about competitive

harm or the physical security of assets? If so, how can we mitigate those concerns? Are there exceptions or exemptions to a granular location disclosure requirement that we should consider?

13. If a registrant determines that the flooding of its buildings, plants, or properties is a material risk, should we require it to disclose the percentage of those assets that are in flood hazard areas in addition to their location, as proposed? Would such disclosure help investors evaluate the registrant's exposure to physical risks related to floods? Should we require this disclosure from all registrants, including those that do not currently consider exposure to flooding to be a material physical risk? Should we require this disclosure from all registrants operating in certain industrial sectors and, if so, which sectors? Should we define "flood hazard area" or provide examples of such areas? If we should define the term, should we define it similar to a related definition by the Federal Emergency Management Agency ("FEMA") as an area having flood, mudflow or flood-related erosion hazards, as depicted on a flood hazard boundary map or a flood insurance rate map? Should we require a registrant to disclose how it has defined "flood hazard area" or whether it has used particular maps or software tools when determining whether its buildings, plants, or properties are located in flood hazard areas? Should we recommend that certain maps be used to promote comparability? Should we require disclosure of whether a registrant's assets are located in zones that are subject to other physical risks, such as in locations subject to wildfire risk?

14. If a material risk concerns the location of assets in regions of high or extremely high water stress, should we require a registrant to quantify the assets (*e.g.*, book value and as a percentage of total assets) in those regions in addition to their location, as proposed? Should we also require such a registrant to disclose the percentage of its total water usage from water withdrawn in high or extremely high water stressed regions, as proposed? If so, should we

include a definition of a "high water stressed region" similar to the definition provided by the World Resource Institute as a region where 40-80 percent of the water available to agricultural, domestic, and industrial users is withdrawn annually? Should we similarly define an "extremely high water stressed area" as a region where more than 80 percent of the water available to agricultural, domestic, and industrial users is withdrawn annually? Are there other definitions of high or extremely high water stressed areas we should use for purposes of this disclosure? Would these items of information help investors assess a registrant's exposure to climate-related risks impacting water availability? Should we require the disclosure of these items of information from all registrants, including those that do not currently consider having assets in high water-stressed areas a material physical risk? Should we require these disclosures from all registrants operating in certain industrial sectors and, if so, which sectors?

15. Are there other specific metrics that would provide investors with a better understanding of the physical and transition risks facing registrants? How would investors benefit from the disclosure of any additional metrics that would not necessarily be disclosed or disclosed in a consistent manner by the proposed climate risk disclosures? What, if any, additional burdens would registrants face if they were required to disclose additional climate risk metrics?

16. Are there other areas that should be included as examples in the definitions of acute or chronic risks? If so, for each example, please explain how the particular climate-related risk could materially impact a registrant's operations or financial condition.

17. Should we include the negative impacts on a registrant's value chain in the definition of climate-related risks, as proposed? Should we define "value chain" to mean the upstream and downstream activities related to a registrant's operations, as proposed? Are there any upstream or downstream activities included in the proposed definition of value chain that we should

exclude or revise? Are there any upstream or downstream activities that we should add to the definition of value chain? Are there any upstream or downstream activities currently proposed that should not be included?

18. Should we define climate-related opportunities as proposed? Should we permit a registrant, at its option, to disclose information about any climate-related opportunities that it is pursuing, such as the actual or potential impacts of those opportunities on the registrant, including its business or consolidated financial statements, as proposed? Should we specifically require a registrant to provide disclosure about any climate-related opportunities that have materially impacted or are reasonably likely to impact materially the registrant, including its business or consolidated financial statements? Is there a risk that the disclosure of climate-related opportunities could be misleading and lead to "greenwashing"? If so, how should this risk be addressed?

C. Disclosure Regarding Climate-Related Impacts on Strategy, Business Model, and Outlook

1. Disclosure of Material Impacts

Once a registrant has described the climate-related risks reasonably likely to have a material impact on the registrant's business or consolidated financial statements as manifested over the short, medium, and long term as required by proposed Item 1502(a), proposed Item 1502(b) would require the registrant to describe the actual and potential impacts of those risks on its strategy, business model, and outlook.[220] Several commenters stated that many registrants have included largely boilerplate discussions about climate-related risks and failed to provide a meaningful analysis of the impacts of those risks on their businesses.[221] The TCFD's most recent assessment of public companies' voluntary climate reports also noted that a minority of companies disclosed the impacts of climate-related risks and opportunities on their businesses in alignment with the TCFD framework.[222] Because information about how climate-related risks have impacted or are likely to impact a registrant's strategy, business model, and outlook can be important for purposes of making an investment or voting decision about the registrant, we are proposing the provisions below to elicit robust and company-specific disclosure on this topic.

As proposed, a registrant would be required to disclose impacts on its:

- Business operations, including the types and locations of its operations;
- Products or services;
- Suppliers and other parties in its value chain;
- Activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes;
- Expenditure for research and development; and

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220 *See* proposed 17 CFR 229.1502(b).

221 *See, e.g.*, letters from CALSTRS; Cardano Risk Management Ltd.; Climate Risk Disclosure Lab (June 14, 2021); and Colorado PERA (June 11, 2021).

222 *See* TCFD, *2021 Status Report*, Section B (Oct. 2021) (stating that, based on a review of reports of 1,651 public companies from 2018-2020, while 38-52% of companies surveyed described climate-related risks and opportunities during 2018-2020, only 26-39% disclosed the impacts of those risks and opportunities during this period).

- Any other significant changes or impacts.[223]

A registrant would also be required to disclose the time horizon for each described impact (*i.e.*, as manifested in the short, medium, or long term, as defined by the registrant when determining its material climate-related risks).[224]

The proposed rules would require a registrant to discuss how it has considered the identified impacts as part of its business strategy, financial planning, and capital allocation.[225] A registrant would be required to provide both current and forward-looking disclosures[226] that facilitate an understanding of whether the implications of the identified climate-related risks have been integrated into the registrant's business model or strategy, including how resources are being used to mitigate climate-related risks.[227] The discussion must also include how any of the metrics referenced in proposed Rule 14-02 of Regulation S-X and Item 1504 of Regulation S-K or any of the targets referenced in proposed Item 1506 relate to the registrant's business model or business strategy.[228]

For example, a registrant that operates in a jurisdiction that has imposed or is likely to impose limits on GHG emissions in support of the Paris Agreement might set a long-term target of net zero GHG emissions from its operations in 2050, a medium-term target of reducing its

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223 *See* proposed 17 CFR 229.1502(b)(1).

224 *See* proposed 17 CFR 229.1502(b)(2).

225 *See* proposed 17 CFR 229.1502(c).

226 *See infra* Sections II.C.3 and 4, II.E, II.G.1, and II.I regarding the application to forward-looking climate disclosures of the PSLRA safe harbor for forward-looking statements.

227 *See id*.

228 *See infra* Sections II.F and II.G for a discussion of the proposed metrics and targets.

emissions by 30 percent by 2030, and a short-term target of maintaining its emissions at its 2020 rate through 2023. This registrant could face material transition risks due to the estimated costs of the operational changes expected to be implemented to achieve these targets. The registrant would be required to disclose these transition risks and their impacts on its strategy, business model, and outlook.

Some of the described impacts would likely be common across industries and may involve reducing a registrant's Scopes 1 and 2 GHG emissions[229] and incurring increased expenses in the short term related to, for example, acquiring new technology to curb its operational emissions and increasing the amount of electricity purchased from renewable sources. Other described impacts of material transition risks, however, would likely vary by industry. For example, an oil company might determine that a likely change in demand for fossil fuel-based products would require it to modify its business model or alter its product mix to emphasize advanced diesel gas and biofuels in order to maintain or increase its earning capacity, thereby requiring disclosure under the proposed rules. An electric utilities company might disclose an increase in the amount of electricity generated from less carbon-intensive sources, such as wind turbines, nuclear, hydroelectric, or solar power to meet current or likely regulatory constraints.

A registrant would also be required to disclose the material impacts of physical risks on its strategy, business model, and outlook. For example, an agricultural producer or distributor might disclose the likely impacts of drought on its own product mix or that of its suppliers, including increased expenses for additional water or due to the procurement of alternative

[229] *See supra* Section I.D.2 and *infra* Section II.G for a discussion of Scopes 1 and 2 emissions.

product sources. Similarly, a mining company that operates in areas susceptible to extreme rise in temperatures might disclose the likely impacts that this temperature rise has on its workforce and on its production schedule, including a reduction in output and future earning capacity. A real estate company that owns coastal property might disclose the likely impacts of rising sea levels on such property, including the potential diminution in value of, and a potential change in its strategy and outlook regarding, such properties.

The proposed rules would require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks described in response to proposed Item 1502(a) have affected or are reasonably likely to affect the registrant's consolidated financial statements.[230] The discussion should include any of the financial statement metrics disclosed pursuant to proposed Regulation S-X Rule 14-02.[231] As previously noted, many commenters recommended that we require registrants to discuss and analyze their quantitative climate data in a manner similar to that required for MD&A.[232] Proposed 17 CFR 229.1502(d) (Item 1502(d) of Regulation S-K) is intended to provide climate-related disclosure that is similar to MD&A, although, as previously noted, a registrant may provide such disclosure as part of its MD&A.

For example, an automobile manufacturer might discuss an increase in operating costs or capital expenditures due to the need to revamp its assembly lines to build lower emission vehicles to comply with new regulatory guidelines or to meet changing consumer demand. An

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[230] *See* proposed 17 CFR 229.1502(d). To the extent that the proposed narrative discussion is provided in its MD&A, a registrant could incorporate by reference that part of the MD&A into the Climate-Related Disclosure section of the registration statement or report. *See supra* Section II.A.2.

[231] *See infra* Section II.F.

[232] *See supra* note 171.

oil company might discuss a change in the valuation of its proven reserves because of an anticipated reduced demand for fossil fuels. A freight company might discuss impairment charges or early write-offs for older equipment it might need to replace due to anticipated changes in regulation or policy favoring lower emissions equipment. While a registrant may currently have an obligation to make some of these disclosures pursuant to Regulation S-X, the disclosed impacts in the financial statements may not be in disaggregated form and may lack explanation. Proposed Item 1502(d) would require the disclosure in the form of a narrative analysis akin to MD&A that would be more easily accessible for investors.

Moreover, it is likely that any disclosed impacts in the financial statements would be assessed for the fiscal years presented in the financial statements with a focus on near short-term impacts. Because proposed Item 1502 would require a registrant to identify material climate-related impacts that may manifest in the short, medium, and long term, a registrant's narrative discussion of the likely climate-related impacts on its consolidated financial statements should cover more than just short-term impacts. For example, if a registrant has a transition plan[233] that includes the development of lower carbon products and processes, that registrant might disclose that it expects to incur higher initial capital costs to implement its strategy, but anticipates increased revenues or reduced expenses over the longer term. An automobile manufacturer that transitions from the production of internal combustion engine vehicles to the production of electric vehicles might disclose that it expects to incur costs in the short term to change its manufacturing processes, but over the longer term, it expects to realize increased sales, protect

[233] *See infra* Section II.E for proposed disclosure requirements regarding the use of a transition plan.

its market share against transition risks, including reputational risks, and potentially avoid regulatory fines or other costs as consumer and regulatory demands change.

2. Disclosure of Carbon Offsets or Renewable Energy Credits If Used

If, as part of its net emissions reduction strategy, a registrant uses carbon offsets or renewable energy credits or certificates ("RECs"), the proposed rules would require it to disclose the role that carbon offsets or RECs play in the registrant's climate-related business strategy.[234] Under the proposed rules, carbon offsets represent an emissions reduction or removal of greenhouse gases in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions.[235] We are proposing to define a REC, consistent with the EPA's commonly used definition, to mean a credit or certificate representing each purchased megawatt-hour (1 MWh or 1000 kilowatt-hours) of renewable electricity generated and delivered to a registrant's power grid.[236] While both carbon offsets and RECs represent commonly used GHG emissions mitigation options for companies, they are used for somewhat different purposes.[237]

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[234] *See* proposed 17 CFR 229.1502(c).

[235] *See* proposed 17 CFR 229.1500(a).

[236] *See* proposed 17 CFR 229.1500(n). *See, e.g.*, EPA, *Offsets and RECs: What's the Difference?*, available at https://www.epa.gov/sites/default/files/2018-03/documents/gpp_guide_recs_offsets.pdf.

[237] A company may purchase carbon offsets to address its direct and indirect GHG emissions (*i.e.*, its Scopes 1, 2, and 3 emissions) by verifying global emissions reductions at additional, external projects. The reduction in GHG emissions from one place ("offset project") can be used to "offset" the emissions taking place somewhere else (at the company's operations). *See, e.g.*, EPA, *Offsets and RECs: What's the Difference?*, available at https://www.epa.gov/sites/default/files/2018-03/documents/gpp_guide_recs_offsets.pdf. In contrast, a company may purchase a REC in renewable electricity markets solely to address its indirect GHG emissions associated with purchased electricity (*i.e.*, Scope 2 emissions) by verifying the use of zero- or low-emissions renewable sources of electricity. Each REC provides its owner exclusive rights to the attributes of one megawatt-hour of renewable electricity whether that renewable electricity has been installed on the company's facilities or produced elsewhere. *See id*.

Some registrants might plan to use carbon offsets or RECs as their primary means of meeting their GHG reduction goals, including those formulated in response to government law or policy or customer or investor demands. Other registrants, including those that set Science Based Targets pursuant to the Science Based Targets Initiative,[238] might develop strategies to reduce their emissions to the extent possible through operational changes–such as modifications to their product offerings or the development of solar or other renewable energy sources. They then might plan to use carbon offsets or RECs to offset the remainder of their emissions that they cannot reduce through operational changes or to meet their GHG reduction goals while they transition to lower carbon operations.

Understanding the role that carbon offsets or RECs play in a registrant's climate-related business strategy can help investors gain useful information about the registrant's strategy, including the potential risks and financial impacts. A registrant that relies on carbon offsets or RECs to meet its goals might incur lower expenses in the short term but could expect to continue to incur the expense of purchasing offsets or RECs over the long term. It also could bear the risk of increased costs of offsets or RECs if increased demand for offsets or RECs creates scarcity and higher costs to acquire them over time. Alternatively, the value of an offset may decrease substantially and suddenly if, for example, the offset represents protected forest land that burns in a wildfire and no longer represents a reduction in GHG emissions. In that case, the registrant

[238] Science Based Targets Initiative ("SBTi") is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wide Fund for Nature (WWF), which defines and promotes best practice in emissions reductions and net-zero targets in line with climate science. SBTi provides technical assistance and its expertise to companies who voluntarily set science-based targets in line with the latest climate science. *See* SBTi, *Who We Are/What We Do*, available at https://sciencebasedtargets.org/about-us#who-we-are. The SBTi does not permit offsets to be counted toward a company's emission reduction targets to meet its science-based targets but does permit offsets by companies that wish to finance additional emission reductions beyond their science-based targets. *See SBTi Criteria and Recommendations* (Apr. 2020), available at https://sciencebasedtargets.org/resources/legacy/2019/03/SBTi-criteria.pdf.

may need to write off the offset and purchase a replacement. In other cases, increased demand for, or scarcity of, offsets and RECs may benefit a registrant that produces or generates offsets or RECs to the extent their prices increase. Accordingly, under the proposed rules, a registrant that purchases offsets or RECs to meet its goals as it makes the transition to lower carbon products would need to reflect this additional set of short and long-term costs and risks in its Item 1502 disclosure, including the risk that the availability or value of offsets or RECs might be curtailed by regulation or changes in the market.

3. Disclosure of a Maintained Internal Carbon Price

Some registrants may use an internal carbon price when assessing climate-related factors. Under the proposed definition, an internal carbon price is an estimated cost of carbon emissions used internally within an organization.[239] Internal carbon pricing may be used by a registrant, among other purposes, as a planning tool to help identify climate-related risks and opportunities, as an incentive to drive energy efficiencies to reduce costs, to quantify the potential costs the company would incur should a carbon price be put into effect, and to guide capital investment decisions. If a registrant uses an internal carbon price, the proposed rules would require it to disclose:

- The price in units of the registrant's reporting currency per metric ton of carbon dioxide equivalent ("CO_2e");[240]

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[239] *See* proposed 17 CFR 229.1500(j).

[240] *See infra* Section II.G for a discussion of our proposal to use CO_2e as a unit of measurement in the proposed requirements.

- The total price, including how the total price is estimated to change over time, if applicable;
- The boundaries for measurement of overall CO_2e on which the total price is based (if different from the GHG emission organizational boundary required pursuant to 17 CFR 229.1504(e)(2);[241] and
- The rationale for selecting the internal carbon price applied.[242]

These proposed items of disclosure would help investors understand the rationale and underlying assumptions for a registrant's internal carbon price and help them assess whether the registrant's use of an internal carbon price as a planning tool is reasonable and effective.

A registrant would also be required to describe how it uses its disclosed internal carbon price to evaluate and manage climate-related risks.[243] If a registrant uses more than one internal carbon price, the proposed rules would require it to provide disclosures for each internal carbon price, and to disclose its reasons for using different prices.[244] For example, a registrant might disclose that it uses different internal carbon prices when considering different climate-related scenarios to help it develop an appropriate business strategy over the short-, medium-, and long-term.[245]

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[241] *See infra* Section II.G.2 for a discussion of the proposed requirements for determining the GHG emission organizational boundary.

[242] *See* proposed 17 CFR 229.1502(e)(1).

[243] *See* proposed 17 CFR 229.1502(e)(2).

[244] *See* proposed 17 CFR 229.1502(e)(3).

[245] *See infra* Section II.C.4 for the proposed disclosure required if a registrant uses scenario analysis.

Commenters that addressed the topic of carbon price generally supported requiring its disclosure in some form, such as: (i) establishing a broad-based carbon price; (ii) requiring companies to maintain and disclose an internal carbon price; (iii) requiring disclosure of any internal carbon price already used by a company; or (iv) requiring disclosure of carbon prices used in the context of scenario analysis.[246] One commenter referred to disclosure of a company's use of internal carbon pricing as one of several "foundational climate disclosures" that should be required in any Commission rule.[247] Another commenter also underscored the importance of this information, stating that "the thorough quantification of climate risk has been hampered by the lack of carbon pricing."[248] We agree with commenters that supported the disclosure of carbon pricing as a key data point for evaluating how a registrant is planning for and managing climate-related risks. However, the proposed rules would not require registrants to maintain an internal carbon price or to mandate a particular carbon pricing methodology. We are aware that many registrants may not currently track this information and recognize that a robust carbon market on which to base such a price may not exist in many contexts.[249] Accordingly, the proposed disclosures would be required only if the registrant otherwise maintains an internal carbon price. For similar reasons, we have not proposed requiring a specific methodology for setting an internal carbon price.

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246 *See, e.g.*, letters from Rob Bonta, California Attorney General, on behalf of several state attorney generals (June 14, 2021); Catavento; Center for Climate and Energy Solutions; Ceres; Climate Risk Disclosure Lab; Hermes Equity Ownership Services Limited; Majedie Asset Management; Managed Funds Association; Norges Bank Investment Management; Open Source Climate; PRI (Consultation Response); Regenerative Crisis Response Committee; Total Energies (June 13, 2021); and Trillium Asset Management. *But see* Edison Electric Institute (stating that a "'robust carbon market' does not exist today" and disclosures based on that market would be "fraught with risk").

247 Letter from Ceres.

248 Letter from PRI.

249 *See* Edison Electric Institute.

Registrants may choose to use an internal carbon price when quantifying, analyzing, and assessing the financial impacts of climate-related risks and climate-related opportunities. For example, an internal carbon price helps monetize emissions by converting emissions data from CO_2e into a value in the registrant's reporting currency. A registrant may determine that monetization is useful when assessing the costs and benefits of its possible climate-related strategies, as it effectively puts a price on the emission impacts. Disclosure of an internal carbon price, when used by a registrant, would provide investors with material information regarding how the registrant developed a particular business strategy to mitigate or adapt to identified climate-related risks and would help quantify for investors at least part of the transition risks faced by a registrant. We believe that this proposed disclosure requirement would help investors assess whether a registrant's internal carbon pricing practice is reasonable and whether its overall evaluation and planning regarding climate-related factors is sound.[250]

A registrant's disclosure of any internal carbon price necessarily would include assumptions about future events. The carbon price applied should not be viewed as a promise or guarantee with regard to the future costs to the registrant of GHG emissions. Moreover, to the extent that certain information regarding a registrant's internal carbon pricing would constitute forward-looking statements, the PSLRA safe harbors would apply to such statements, assuming all other statutory requirements for those safe harbors are satisfied.

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[250] We also note, based on current voluntary reporting, an increasing trend among public companies to use internal carbon pricing. *See* CDP, *Putting a Price on Carbon* (2021), *available at* https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/651/original/CDP_Global_Carbon_Price_report_2021.pdf?1618938446.

4. Disclosure of Scenario Analysis, if Used

We are proposing to require a registrant to describe the resilience of its business strategy in light of potential future changes in climate-related risks. A registrant also would be required to describe any analytical tools, such as scenario analysis, that the registrant uses to assess the impact of climate-related risks on its business and consolidated financial statements, or to support the resilience of its strategy and business model in light of foreseeable climate-related risks.[251] Scenario analysis is a process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty.[252] The proposed definition of scenario analysis both states that (i) when applied to climate-related assessments, scenario analysis is a tool used to consider how, under various possible future climate scenarios, climate-related risks may impact a registrant's operations, business strategy, and consolidated financial statements over time; and that (ii) registrants might use scenario analysis to test the resilience of their strategies under future climate scenarios, including scenarios that assume different global temperature increases, such as, for example, 3 °C, 2 °C, and 1.5 ºC above pre-industrial levels.[253]

Many commenters recommended that we require a registrant to conduct scenario analysis and disclose the results of such analysis.[254] One commenter stated that scenario analysis was

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[251] *See* proposed 17 CFR229.1502(f).

[252] *See, e.g.*, the definition of "scenario analysis" in TCFD, *Recommendations of the Task Force on Climate-related Financial Disclosures*.

[253] *See* proposed 17 CFR 229.1500(o).

[254] *See, e.g.*, letters from AllianceBernstein; Americans for Financial Reform Education Fund; R. Ted Atwood (June 23, 2021); BlackRock; Bloomberg, LP; Boston Common Asset Management; Cardano Risk Management Ltd.; Certified B Corporations; Climate Governance Initiative; Climate Risk Disclosure Law and Policy Lab (June 14, 2021); Consumer Federation of America; CPP Investments; E2; ERM CVS; FAIRR Initiative; Forum for Sustainable and Responsible Investment (June 11, 2021); Friends of the Earth *et al.*; George Georgiev;

useful because it allows companies to test their business strategy against a spectrum of hypothetical future climate scenarios and develop a better informed view of implications for their enterprise value and value chains. The same commenter further indicated that disclosure of the scenarios used by a company was necessary to inform investors about the reliability, reasonableness, and resiliency of the company's plans to address climate-related risks and opportunities.[255]

Another commenter stated that the Commission should require disclosure of a registrant's climate scenario analysis by no later than 2025, and recommended that companies engage in scenario analysis involving a base case, worse case, better case, and "Black Swan" scenarios related to possible climate transition pathways.[256] Alternatively, the commenter suggested that a company take into account three scenarios: a smooth economic transition to +1.5 °C, which would form the basis of the company's net-zero strategy; a disorderly and, therefore, more costly and disruptive transition to +1.5 °C; and a higher temperature scenario outcome of +3 °C of warming, which would be associated with extreme physical effects and unprecedented economic costs and disruption. This commenter further stated that robust disclosure of a company's scenario analysis was necessary so that investors can understand how longer-term "climate drivers" have been incorporated into its corporate strategy and financial disclosures.[257]

Global Equity Strategy (June 14, 2021); Impax Asset Management; Invesco; Christopher Lish; NY State Comptroller; PRI (Consultation Response); Revolving Door Project; RMI; Trillium Asset Management; UNEP; and Sens. Elizabeth Warren and Rep. Sean Casten (June 11, 2021).

255 *See* letter from Bloomberg.

256 *See* letter from Climate Governance Initiative.

257 *See id*.

Another commenter expressed the view that, although many companies purport to use scenario analysis in the climate context, their reporting regarding such use has been generally deficient. That commenter stated that the assumptions underlying the selected scenarios often are undisclosed and that the analysis tends to be limited and not usefully comparable.[258] The TCFD's most recent assessment of public companies' voluntary climate reporting similarly found that only a small percentage of the surveyed companies disclosed the resilience of their strategies using scenario analysis as recommended by the TCFD.[259]

Some commenters recommended providing certain accommodations in connection with a scenario analysis requirement, such as creating a safe harbor for scenario analysis disclosure[260] or permitting scenario analysis to be furnished in a separate report that would not be subject to the same liability as Commission filings.[261] Other commenters stated that they opposed a scenario analysis requirement because of the lack of a common methodology for scenario analysis;[262] a belief that the underlying methodology would be too difficult for investors to

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258 *See* letter from Ceres. The CDP similarly reported that, although 54% of the 9600+ companies that responded to their questionnaires in 2020 reported engaging in scenario analysis, 14% of the companies only considered one scenario with many others considering only slight variations of one scenario. *See* CDP, *3 common pitfalls of using scenario analysis – and how to avoid them* (Mar. 10, 2021), available at https://www.cdp.net/en/articles/companies/3-common-pitfalls-companies-make-when-using-scenario-analysis-and-how-to-avoid-them.

259 *See* TCFD, 2021 Status Report, Section B (indicating that, during 2018-2020, only 5-13% of the surveyed companies disclosed the resilience of their strategies using scenario analysis).

260 *See* letter from J. Robert Gibson.

261 *See* letter from NEI Investments.

262 *See* letter from Information Technology Industry Council.

understand;[263] the need for further development of scenario analysis as a discipline;[264] or a belief that the focus of climate-related disclosure should be on historical data, and not on forward-looking information.[265]

We agree with those commenters who stated that information concerning scenario analysis could help investors evaluate the resilience of the registrant's business strategy in the face of various climate scenarios that could impose potentially different climate-related risks. We are not, however, proposing to mandate that registrants conduct scenario analysis. We recognize that not every registrant conducts scenario analysis and that, in certain instances, it may be costly or difficult for some registrants to conduct such scenario analysis. Instead, the proposed rules would require that if a registrant uses scenario analysis or any analytical tools to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model, the registrant must disclose certain information about such analysis.[266] We believe this approach strikes an appropriate balance between the various positions expressed by commenters by requiring registrants to share any scenario analysis that they are otherwise conducting for their business operations while avoiding imposing a potentially difficult or burdensome requirement on those registrants that have not yet undertaken to conduct such analysis.

If a registrant uses scenario analysis, the proposed amendments would require disclosure of the scenarios considered (*e.g.*, an increase of no greater than 3 º, 2 º, or 1.5 ºC above pre-

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[263] *See* letter from Dimensional Fund Advisors.

[264] *See* letter from bp.

[265] *See* letter from Nareit (June 11, 2021).

[266] *See* proposed 17 CFR 229.1502(f). One commenter recommended requiring the disclosure of the results of scenario analysis if a registrant has engaged in such analysis. *See* letter from E3G.

industrial levels), including parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant's business strategy under each scenario. The disclosure should include both quantitative and qualitative information. Disclosure of the parameters, assumptions, and analytical choices involved in the described scenarios would help investors better understand the various considered scenarios and help them evaluate whether the registrant has a plan to manage the climate-related risks posed by each scenario.

Because a registrant's scenario analysis disclosure would necessarily include predictions and other forward-looking statements based on assumptions concerning future events, we believe that the PSLRA forward-looking safe harbors would apply to much of the disclosure concerning scenario analysis provided the other statutory conditions for application of the safe harbor are met.

We note that there are a number of publicly-available climate-related scenarios that could form the basis of a registrant's scenario analysis. The TCFD has categorized these scenarios as transition scenarios and physical climate scenarios.[267] If a registrant uses scenario analysis to assess the resilience of its business strategy to climate-related risks, investors may benefit from the use of scientifically based, widely accepted scenarios, such as those developed by the IPCC, International Energy Agency ("IEA"),[268] or Network of Central Banks and Supervisors for Greening the Financial System ("NGFS").[269] Investors may also benefit by the use of more than

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[267] *See* TCFD, Technical Supplement, *The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities* (June 2017), available at https://assets.bbhub.io/company/sites/60/2020/09/2020-TCFD_Guidance-Scenario-Analysis-Guidance.pdf.

[268] The TCFD has summarized a number of publicly available scenario analysis models, with particular emphasis on the transition scenarios developed by the IEA and the physical risk scenarios developed by the IPCC. *See id.* at Appendix 1: IEA and IPCC Climate Scenarios.

[269] *See* NGFS, *Scenarios Portal*, available at https://www.ngfs.net/ngfs-scenarios-portal/.

one climate scenario, including one that assumes a disorderly transition (*i.e.*, one that assumes that climate policies are delayed or divergent across countries and industrial sectors, resulting in higher transition risks to companies). These could enhance the reliability and usefulness of the scenario analysis for investors.

Request for Comment

19. Should we require a registrant to describe the actual and potential impacts of its material climate-related risks on its strategy, business model, and outlook, as proposed? Should we require a registrant to disclose impacts from climate-related risks on, or any resulting significant changes made to, its business operations, including the types and locations of its operations, as proposed?

20. Should we require a registrant to disclose climate-related impacts on, or any resulting significant changes made to, its products or services, supply chain or value chain, activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes, expenditure for research and development, and any other significant changes or impacts, as proposed? Are there any other aspects of a registrant's business operations, strategy, or business model that we should specify as being subject to this disclosure requirement to the extent they may be impacted by climate-related factors?

21. Should we require a registrant to specify the time horizon applied when assessing its climate-related impacts (*i.e.*, in the short, medium, or long term), as proposed?

22. Should we require a registrant to discuss whether and how it considers any of the described impacts as part of its business strategy, financial planning, and capital allocation, as proposed? Should we require a registrant to provide both current and forward-looking disclosures to facilitate an understanding of whether the implications of the identified climate-

related risks have been integrated into the registrant's business model or strategy, as proposed? Would any of the proposed disclosures present competitive concerns for registrants? If so, how can we mitigate such concerns?

23. Should we require the disclosures to include how the registrant is using resources to mitigate climate-related risks, as proposed? Should the required discussion also include how any of the metrics or targets referenced in the proposed climate-related disclosure subpart of Regulation S-K or Article 14 of Regulation S-X relate to the registrant's business model or business strategy, as proposed? Should we require additional disclosures if a registrant leverages climate-related financing instruments, such as green bonds or other forms of "sustainable finance" such as "sustainability-linked bonds," "transition bonds," or other financial instruments linked to climate change as part of its strategy to address climate-related risks and opportunities? For example, should we require disclosure of the climate-related projects that the registrant plans to use the green bond proceeds to fund? Should we require disclosure of key performance metrics tied to such financing instruments?

24. If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the role that the offsets or RECs play in its overall strategy to reduce its net carbon emissions, as proposed? Should the proposed definitions of carbon offsets and RECs be clarified or expanded in any way? Are there specific considerations about the use of carbon offsets or RECs that we should require to be disclosed in a registrant's discussion regarding how climate-related factors have impacted its strategy, business model, and outlook?

25. Should we require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks have affected or are reasonably likely to affect its consolidated financial statements, as proposed? Should the discussion include any of the

financial statement metrics in proposed 17 CFR 210.14-02 (14-02 of Regulation S-X) that demonstrate that the identified climate-related risks have had a material impact on reported operations, as proposed? Should the discussion include a tabular representation of such metrics?

26. Should we require registrants to disclose information about an internal carbon price if they maintain one, as proposed? If so, should we require that the registrant disclose:

- The price in units of the registrant's reporting currency per metric ton of CO_2e;
- The total price;
- The boundaries for measurement of overall CO_2e on which the total price is based if different from the GHG emission organizational boundary required pursuant to 17 CFR 210.14-03(d)(4); and
- The rationale for selecting the internal or shadow carbon price applied, as proposed?

Should we also require registrants to describe the methodology used to calculate its internal carbon price?

27. Should we also require a registrant to disclose how it uses the described internal carbon price to evaluate and manage climate-related risks, as proposed? Should we further require a registrant that uses more than one internal carbon price to provide the above disclosures for each internal carbon price, and disclose its reasons for using different prices, as proposed? Are there other aspects regarding the use of an internal carbon price that we should require to be disclosed? Would disclosure regarding any internal carbon price maintained by a registrant elicit important or material information for investors? Would requiring the disclosure of the registrant's use of an internal carbon price raise competitive harm concerns that would act as a disincentive from the use of an internal carbon price? If so, should the Commission provide an accommodation

that would mitigate those concerns? For example, are there exceptions or exemptions to an internal carbon price disclosure requirement that we should consider?

28. To the extent that disclosure that incorporates or is based on an internal carbon price constitutes forward-looking information, the PSLRA safe harbors would apply. Should we adopt a separate safe harbor for internal carbon price disclosure? If so, what disclosures should such a safe harbor cover and what should the conditions be for such a safe harbor?

29. Should we require all registrants to disclose an internal carbon price and prescribe a methodology for determining that price? If so, what corresponding disclosure requirements should we include in connection with such mandated carbon price? What methodology, if any, should we prescribe for calculating a mandatory internal or shadow carbon price? Would a different metric better elicit disclosure that would monetize emissions?

30. Should we require a registrant to disclose analytical tools, such as scenario analysis, that it uses to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model, as proposed? What other analytical tools do registrants use for these purposes, and should we require disclosure of these other tools? Are there other situations in which some registrants should be required to conduct and provide disclosure of scenario analysis? Alternatively, should we require all registrants to provide scenario analysis disclosure? If a registrant does provide scenario analysis disclosure, should we require it to follow certain publicly available scenario models, such as those published by the IPCC, the IEA, or NGFS and, if so, which scenarios? Should we require a registrant providing scenario analysis disclosure to include the scenarios considered (*e.g.*, an increase of global temperature of no greater than 3 º, 2 º, or 1.5 ºC above pre-industrial levels), the parameters, assumptions, and analytical choices, and the projected principal financial impacts

on the registrant's business strategy under each scenario, as proposed? Are there any other aspects of scenario analysis that we should require registrants to disclose? For example, should we require a registrant using scenario analysis to consider a scenario that assumes a disorderly transition? Is there a need for us to provide additional guidance regarding scenario analysis? Are there any aspects of scenario analysis in our proposed required disclosure that we should exclude? Should we also require a registrant that does not use scenario analysis to disclose that it has not used this analytical tool? Should we also require a registrant to disclose its reasons for not using scenario analysis? Will requiring disclosure of scenario analysis if and when a registrant performs scenario analysis discourage registrants from conducting scenario analysis? If so, and to the extent scenario analysis is a useful tool for building strategic resilience, how could our regulations prevent such consequences?

31. Would the PSLRA forward-looking statement safe harbors provide adequate protection for the proposed scenario analysis disclosure? Should we instead adopt a separate safe harbor for scenario analysis disclosure? If so, what disclosures should such a safe harbor cover that would not be covered by the PSLRA safe harbors and what should the conditions be for such a safe harbor?

32. Should we adopt a provision similar to 17 CFR 229.305(d) that would apply the PSLRA forward-looking statement safe harbor to forward-looking statements made in response to specified climate-related disclosure items, such as proposed Item 1502 and Item 1505 (concerning targets and goals) of Regulation S-K? If so, which proposed items should we specifically include in the safe harbor?

33. As proposed, a registrant may provide disclosure regarding any climate-related opportunities when responding to any of the provisions under proposed 17 CFR 229.1502 (Item

1502). Should we require disclosure of climate-related opportunities under any or all of the proposed Item 1502 provisions?

D. Governance Disclosure

Similar to the TCFD framework, the proposed rules would require a registrant to disclose, as applicable, certain information concerning the board's oversight of climate-related risks, and management's role in assessing and managing those risks.[270] Many commenters asserted that climate-related issues should be subject to the same level of board oversight as other financially material matters.[271] Most of these commenters supported robust disclosure of a board's and management's governance of climate-related risks and opportunities, consistent with the TCFD framework.[272]

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[270] *See* proposed 17 CFR 229.1501.

[271] *See, e.g.*, letters from Americans for Financial Reform Education Fund; Baillie Gifford; Andrew Behar; Bloomberg, LP; Canadian Coalition for Good Governance; Cardano Risk Management Ltd.; CDP NA (June 11, 2021); Center for American Progress; CAQ; Ceres *et al*.; Climate Disclosure Standards Board (June 14, 2021); Climate Governance Initiative; Climate Risk Disclosure Lab; Eni SpA; ERM CVS; Friends of the Earth, Amazon Watch, and Rainforest Action Network (June 11, 2021); Regenerative Crisis Response Committee; Hermes Equity Ownership Limited; William and Flora Hewlett Foundation (June 9, 2021); Impax Asset Management; Institute of Internal Auditors (May 23, 2021); Institutional Shareholder Services (June 14, 2021); Interfaith Center on Corporate Responsibility; International Corporate Governance Network; Morningstar, Inc.; International Organization for Standardization (June 11, 2021); Natural Resources Defense Council; NEI Investments; NY City Comptroller (June 14, 2021); NY State Comptroller; NY State Department of Financial Services (June 14, 2021); Oregon State Treasury (June 4, 2021); PRI (Consultation Response); Pricewaterhouse Coopers; Revolving Door Project (June 11, 2021); George Serafeim (June 9, 2021); Maria Stoica; TotalEnergies (June 13, 2021); Value Balancing Alliance; WBCSD; and World Benchmarking Alliance.

[272] *See, e.g.*, letters from Baillie Gifford; Bloomberg, LP; Ceres et al.; Climate Disclosure Standards Board; Climate Governance Initiative; Climate Risk Disclosure Lab; Eni SpA; William and Flora Hewlett Foundation; Impax Asset Management; Institute for Governance and Sustainable Development; International Corporate Governance Network; Richard Love; Morningstar, Inc.; Natural Resources Defense Council; NEI Investments; NY State Comptroller; Maria Stoica; TotalEnergies; and WBCSD. *But see* letter from Amanda Rose (stating that federalizing aspects of corporate governance could inhibit the ability of states to compete for corporate charters).

Our proposed disclosure requirements are based on specific recommendations of the TCFD. We agree with commenters that a comprehensive understanding of a board's oversight, and management's governance, of climate-related risks is necessary to aid investors in evaluating the extent to which a registrant is adequately addressing the material climate-related risks it faces, and whether those risks could reasonably affect the value of their investment.[273] We also note that, despite the importance of governance disclosure, according to the TCFD, only a small percentage of issuers that voluntarily provided climate-related information presented governance disclosure aligned with the TCFD's recommendations.[274] While the proposed rules are intended to provide investors with additional insight into a board's and management's governance of climate-related risks, they are similar to the Commission's existing rules under Regulation S-K that call for disclosure about corporate governance in that they are intended to provide investors with relevant information about a registrant's board, management, and principal committees.[275]

1. Board Oversight

The proposed rules would require a registrant to disclose a number of board governance items, as applicable. The first item would require a registrant to identify any board members or board committees responsible for the oversight of climate-related risks.[276] The responsible board committee might be an existing committee, such as the audit committee or risk committee, or a

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273 *See, e.g.*, letters from Bloomberg, LP; and Natural Resources Defense Council.

274 *See* TCFD, *2021 Status Report* (Oct. 2021) (finding that 9% of surveyed companies provided TCFD-recommended board disclosure in 2018, which increased to 25% in 2020; and 9% provided TCFD-recommended management disclosure in 2018, which increased to 18% in 2020).

275 *See, e.g.*, 17 CFR 229.401 and 229.407.

276 *See* proposed 17 CFR 229.1501(a)(1)(i).

separate committee established to focus on climate-related risks. The next proposed item would require disclosure of whether any member of a registrant's board of directors has expertise in climate-related risks, with disclosure required in sufficient detail to fully describe the nature of the expertise.[277]

Another proposed item would require a description of the processes and frequency by which the board or board committee discusses climate-related risks.[278] The registrant would have to disclose how the board is informed about climate-related risks, and how frequently the board considers such risks. These proposed disclosure items could provide investors with insight into how a registrant's board considers climate-related risks and any relevant qualifications of board members.[279]

The proposed rule also would require disclosure about whether and how the board or board committee considers climate-related risks as part of its business strategy, risk management, and financial oversight.[280] This disclosure could enable an investor to understand whether and how the board or board committee considers climate-related risks when reviewing and guiding business strategy and major plans of action, when setting and monitoring implementation of risk management policies and performance objectives, when reviewing and approving annual budgets, and when overseeing major expenditures, acquisitions, and divestitures. In this way, the

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[277] *See* proposed 17 CFR 229.1501(a)(1)(ii).

[278] *See* proposed 17 CFR 229.1501(a)(1)(iii).

[279] *See, e.g.*, letters from Bloomberg, LP; NY State Comptroller; and Vanguard Group, Inc.

[280] *See* proposed 17 CFR 229.1501(a)(1)(iv).

proposed disclosure requirement could help investors assess the degree to which a board's consideration of climate-related risks has been integrated into a registrant's strategic business and financial planning and its overall level of preparation to maintain its shareholder value.

Finally, the proposed rule would require disclosure about whether and how the board sets climate-related targets or goals and how it oversees progress against those targets or goals, including the establishment of any interim targets or goals.[281] Such a target might be, for example, to achieve net-zero carbon emissions for all or a large percentage of its operations by 2050 or to reduce the carbon intensity of its products by a certain percentage by 2030 in order to mitigate transition risk. This proposed requirement would help investors evaluate whether and how a board is preparing to mitigate or adapt to any material transition risks, and whether it is providing oversight for the registrant's potential transition to a lower carbon economy. If applicable, a registrant can elect also to discuss the board's oversight of climate-related opportunities.

2. Management Oversight

Similar to the proposed required disclosures on board oversight, the proposed rules would require a registrant to disclose a number of items, as applicable, about management's role in assessing and managing any climate-related risks. For example, a registrant would be required to disclose, as applicable, whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, to identify such positions or committees and disclose the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise.[282] This proposed requirement would give investors

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[281] *See* proposed 17 CFR 229.1501(a)(1)(v).

[282] *See* proposed 17 CFR 229.1501(b)(1)(i).

additional information to assess the extent to which management addresses climate-related risks, which could help them to make better informed investment or voting decisions.

Similar to the proposed board oversight provision described above, another proposed item would require disclosure about the processes by which the responsible managers or management committees are informed about and monitor climate-related risks.[283] Such a discussion might include, for example, whether there are specific positions or committees responsible for monitoring and assessing specific climate-related risks, the extent to which management relies on in-house staff with the relevant expertise to evaluate climate-related risks and implement related plans of action, and the extent to which management relies on third-party climate consultants for these same purposes.

The final proposed management governance item would require disclosure about whether the responsible positions or committees report to the board or board committee on climate-related risks and how frequently this occurs.[284] These proposed disclosure items could help investors evaluate whether management has adequately implemented processes to identify, assess, and manage climate-related risks. If applicable, a registrant may elect also to describe management's role in assessing and managing climate-related opportunities.

Several commenters recommended that we require a registrant to disclose whether it has connected a portion of its executive remuneration with the achievement of climate-related targets

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[283] *See* proposed 17 CFR 229.1501(b)(1)(ii).

[284] *See* proposed 17 CFR 229.1501(b)(1)(iii).

or goals.[285] Other commenters expressed the view that such a requirement is unnecessary, because a registrant could implement other measures to motivate progress towards climate-related targets[286] or connect executive remuneration with climate-related achievements as a discretionary matter for the registrant.[287] We are not proposing a compensation-related disclosure requirement at this time, because we believe that our existing rules requiring a compensation discussion and analysis should already provide a framework for disclosure of any connection between executive remuneration and achieving progress in addressing climate-related risks.[288]

Request for Comment

34. Should we require a registrant to describe, as applicable, the board's oversight of climate-related risks, as proposed? Should the required disclosure include whether any board member has expertise in climate-related risks and, if so, a description of the nature of the expertise, as proposed? Should we also require a registrant to identify the board members or board committee responsible for the oversight of climate-related risks, as proposed? Do our current rules, which require a registrant to provide the business experience of its board members, elicit adequate disclosure about a board member's or executive officer's expertise relevant to the oversight of climate-related risks?

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[285] *See, e.g.,* letters from Baillie Gifford; Andrew Behar; CDP; Climate Governance Initiative; E3G (June 14, 2021); Interfaith Center on Corporate Responsibility; Majedie Asset Management; NEI Investments; NY State Comptroller; PRI (Consultation Response); RMI (June 11, 2021); Maria Stoica; and Value Balancing Alliance.

[286] *See* letter from Richard Love.

[287] *See* letter from Western Energy Alliance (June 12, 2021).

[288] *See* 17 CFR 229.402(b) (requiring disclosure of all material elements of a registrant's executive compensation, including the objectives of the registrant's compensation programs and what each compensation program is designed to reward). Further, the Commission recently decided to reopen the comment period on rules to implement section 953(a) of the Dodd-Frank Act, which requires disclosure of the relationship between executive compensation and the performance of the issuer. *See* Release No. 34-94074, *Reopening of Comment Period for Pay Versus Performance* (Jan. 27, 2021).

35. Should we require a registrant to disclose the processes and frequency by which the board or board committee discusses climate-related risks, as proposed?

36. Should we require a registrant to disclose whether and how the board or board committee considers climate-related risks as part of its business strategy, risk management, and financial oversight, as proposed? Would the proposed disclosure raise competitive harm concerns? If so, how could we address those concerns while requiring additional information for investors about how a registrant's board oversees climate-related risks?

37. Should we require a registrant to disclose whether and how the board sets climate-related targets or goals, as proposed? Should the required disclosure include how the board oversees progress against those targets or goals, including whether it establishes any interim targets or goals, as proposed? Would the proposed disclosure raise competitive harm concerns? If so, how could we address those concerns while requiring additional information for investors about how a registrant's board oversees the setting of any climate-related targets or goals?

38. Should we require a registrant to describe, as applicable, management's role in assessing and managing climate-related risks, as proposed? Should the required disclosure include whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, the identity of such positions or committees, and the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise, as proposed? Should we require a registrant to identify the executive officer(s) occupying such position(s)? Or do our current rules, which require a registrant to provide the business experience of its executive officers, elicit adequate disclosure about management's expertise relevant to the oversight of climate-related risks?

39. Should we require a registrant to describe the processes by which the management positions or committees responsible for climate-related risks are informed about and monitor climate-related risks, as proposed? Should we also require a registrant to disclose whether and how frequently such positions or committees report to the board or a committee of the board on climate-related risks, as proposed?

40. Should we specifically require a registrant to disclose any connection between executive remuneration and the achievement of climate-related targets and goals? Is there a need for such a requirement in addition to the executive compensation disclosure required by 17 CFR 229.402(b)?

41. As proposed, a registrant may disclose the board's oversight of, and management's role in assessing and managing, climate-related opportunities. Should we require a registrant to disclose these items?

E. Risk Management Disclosure

1. Disclosure of Processes for Identifying, Assessing, and Managing Climate-Related Risks

The proposed rules would require a registrant to describe any processes the registrant has for identifying, assessing, and managing climate-related risks.[289] Risk disclosure is a long-standing disclosure concept under our regulations.[290] Several commenters recommended that we

[289] *See* proposed 17 CFR 229.1503(a).

[290] Risk factor disclosure has been part of the Commission's Securities Act disclosure requirements since prior to and from adoption of its integrated disclosure system. *See* Release No. 33-6383, *Adoption of Integrated Disclosure System* (Mar. 3, 1982). The Commission added risk factor disclosure to its Exchange Act

adopt decision-useful disclosure requirements concerning a registrant's climate-related risk management practices.[291] More granular information regarding any climate-related risk management could allow investors to better understand how a registrant identifies, evaluates, and addresses climate-related risks that may materially impact its business. Such information could also permit investors to ascertain whether a registrant has made the assessment of climate-related risks part of its regular risk management processes. Despite the importance of climate-related risk management information, only a minority of registrants currently include such information in their voluntary climate reports.[292]

When describing the processes for identifying and assessing climate-related risks, the registrant would be required to disclose, as applicable:

- How it determines the relative significance of climate-related risks compared to other risks;
- How it considers existing or likely regulatory requirements or policies, such as GHG emissions limits, when identifying climate-related risks;

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registration and annual reporting requirements in 2005. *See* Release No. 33-8591, *Securities Offering Reform* (July 19, 2005) [70 FR 44722 (Aug. 3, 2005)].

291 *See, e.g.*, letters from Rob Bonta, California Attorney General *et al*.; Boston Common Asset Management; Carbon Tracker Initiative; Confluence Philanthropy; Hermes Equity Ownership Services Ltd.; The Institute for Policy Integrity ("Policy Integrity") at New York University School of Law, Environmental Defense Fund ("EDF"), the Initiative on Climate Risk and Resilience Law ("ICRRL"), and Professors Madison Condon, Jim Rossi, and Michael Vandenbergh (June 14, 2021) ("Institute for Policy Integrity, Environmental Defense Fund, Initiative on Climate Risk & Resilience Law"); and Total Energies.

292 *See* TCFD, *2021 Status Report*, Section B (indicating that, during 2018-2020, 16-30% of surveyed public companies disclosed their climate risk identification and assessment processes, 14-29% disclosed their risk management processes, and 10-27% disclosed whether their climate risk management processes were integrated into their overall risk management).

- How it considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks; and
- How it determines the materiality of climate-related risks, including how it assesses the potential size and scope of any identified climate-related risk.[293]

When describing any processes for managing climate-related risks, a registrant would be required to disclose, as applicable:

- How it decides whether to mitigate, accept, or adapt to a particular risk;
- How it prioritizes addressing climate-related risks; and
- How it determines how to mitigate a high priority risk.[294]

Together, these proposed disclosures would help investors evaluate whether a registrant has implemented adequate processes for identifying, assessing, and managing climate-related risks so that they may make better informed investment or voting decisions. As part of this risk management description, if a registrant uses insurance or other financial products to manage its exposure to climate-related risks, it may need to describe its use of these products.[295]

The proposed rules would also require a registrant to disclose whether and how climate-related risks are integrated into the registrant's overall risk management system or processes.[296] If a separate board or management committee is responsible for assessing and managing climate-

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[293] *See* proposed 17 CFR 229.1503(a)(1).

[294] *See* proposed 17 CFR 229.1503(a)(2).

[295] To the extent loss of insurance coverage or increases in premiums is reasonably likely to have a material impact on the registrant, the registrant would be required to disclose that risk pursuant to proposed Item 1502(a).

[296] *See* proposed 17 CFR 229.1503(b).

related risks, a registrant would be required to disclose how that committee interacts with the registrant's board or management committee governing risks.[297] These proposed disclosures would help investors assess whether the registrant has centralized the processes for managing climate-related risks, which may indicate to investors how the board and management may respond to such risks as they unfold.

2. Transition Plan Disclosure

Adoption of a transition plan to mitigate or adapt to climate-related risks may be an important part of a registrant's climate-related risk management strategy, particularly if it operates in a jurisdiction that has made commitments under the Paris Agreement to reduce its GHG emissions. Many commenters recommended that we require disclosure regarding a registrant's transition plan, stating that such disclosure would help investors evaluate whether a registrant has an effective strategy to achieve its short-, medium-, or long-term climate-related targets or goals.[298]

The proposed rules would define a "transition plan" to mean a registrant's strategy and implementation plan to reduce climate-related risks.[299] A transition plan may include a plan to reduce its GHG emissions in line with a registrant's commitments or commitments of jurisdictions within which it has significant operations.[300] Transition plans may also be

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297 *See id*.

298 *See, e.g.*, letters from As You Sow; BlackRock; Clean Yield Asset Management; Climate Advisers; Climate Governance Initiative; Fiends of the Earth *et al*; Institute for Governance and Sustainable Development; Miller/Howard Investments; Trillium Asset Management; and World Benchmarking Alliance.

299 *See* proposed 17 CFR 229.1500(s).

300 *See id.*

important to registrants and their shareholders to the extent transition risk arises from changes in customer or business counterparty preferences, technological change, or changes in market prices. If a registrant has adopted a transition plan, the proposed rules would require it to describe its plan, including the relevant metrics and targets used to identify and manage physical and transition risks.[301] This information could help investors understand how a registrant intends to address identified climate-related risks and any transition to a lower carbon economy while managing and assessing its business operations and financial condition. Because transition planning inherently requires judgments and predictions about the future, forward-looking statements made as part of a registrant's discussion of its transition plan would be eligible for the PSLRA forward-looking statement safe harbors provided all applicable conditions are met.[302]

If a registrant has adopted a transition plan as part of its climate-related risk management strategy, the proposed rules would require the registrant to discuss, as applicable, how it plans to mitigate or adapt to any physical risks identified in the filing, including but not limited to those concerning exposure to sea level rise, extreme weather events, wildfires, drought, and severe heat.[303] For example, a company with significant operations in areas vulnerable to sea level rise might plan to relocate its vulnerable operations as part of any transition plan. A company operating in areas subject to severe storms might have a transition plan that includes reinforcing its physical facilities to better withstand such weather events, or a plan to relocate those facilities.

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301 *See* proposed 17 CFR 229.1503(c)(1).

302 *See supra* note 219.

303 *See* proposed 17 CFR 229.1503(c)(2)(i).

An agricultural producer that operates in areas subject to increasing water stress might discuss its plans to adjust its business strategy or operations, for example by developing or switching to drought-resistant crops, developing technologies to optimize the use of available water, or acquiring land in other areas.[304]

The proposed rules would also require a registrant that has adopted a transition plan as part of its climate-related risk management strategy to discuss, as applicable, how it plans to mitigate or adapt to any identified transition risks, including the following:

- Laws, regulations, or policies that:
    - Restrict GHG emissions or products with high GHG footprints, including emissions caps;[305] or
    - Require the protection of high conservation value land or natural assets;[306]
- Imposition of a carbon price;[307] and
- Changing demands or preferences of consumers, investors, employees, and business counterparties.[308]

While each of these transition risks may not be applicable to each registrant and its particular transition plan, the above examples are intended to guide registrants in providing meaningful disclosure about its risk management strategies that is not generic or boilerplate. In

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[304] A registrant would be required to disclose the expected impact of any potential reduction on its results of operations or financial condition pursuant to proposed 17 CFR 229.1502 to the extent it believes the likely impact would be material. Such quantified disclosure may be eligible for the PSLRA safe harbors if the conditions of the safe harbors are met.

[305] *See* proposed 17 CFR 229.1503(c)(2)(ii)(A)(*1*).

[306] *See* proposed 17 CFR 229.1503(c)(2)(ii)(A)(*2*).

[307] *See* proposed 17 CFR 229.1503(c)(2)(ii)(B).

[308] *See* proposed 17 CFR 229.1503(c)(2)(ii)(C).

this regard, it is important for investors to understand how a registrant plans to mitigate or adapt to any identified transition risks in its transition plan given the potential associated costs and burdens and their impact on the registrant's business.

The proposed rules would require a registrant that has adopted a transition plan as part of its climate-related management strategy to update its disclosure about its transition plan each fiscal year by describing the actions taken during the year to achieve the plan's targets or goals.[309] This is intended to provide investors with information that can help them better understand the registrant's effectiveness in implementing any transition plan and the potential risks and costs associated with what it still needs to accomplish.

A registrant that has adopted a transition plan as part of its climate-related risk management strategy may also describe how it plans to achieve any identified climate-related opportunities, such as:

- The production of products that facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure;
- The generation or use of renewable power;
- The production or use of low waste, recycled, or other consumer products that require less carbon intensive production methods;
- The setting of conservation goals and targets that would help reduce GHG emissions; and
- The provision of goods or services related to any transition to a lower carbon economy.[310]

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309 *See* proposed 17 CFR 229.1503(c)(1).

310 *See* proposed 17 CFR 229.1503(c)(3)(i) through (v).

For example, an energy company might discuss how, due to actual or potential regulatory constraints, it intends to take advantage of climate-related opportunities by increasing the amount of electricity purchased that is produced using renewable energy sources, reducing its medium and long-range fossil fuel exploration and production, increasing the percentage of its products consisting of biofuels and other lower emissions fuels, or investing in carbon capture and storage technologies. A transportation company might discuss how, to mitigate reputational risk, it plans to realize any climate-related opportunities presented by switching its existing fleet to one composed of low- or no-emission vehicles by a certain date.[311]

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42. Should we require a registrant to describe its processes for identifying, assessing, and managing climate-related risks, as proposed?

43. When describing the processes for identifying and assessing climate-related risks, should we require a registrant to disclose, as applicable, as proposed:

- How the registrant determines the relative significance of climate-related risks compared to other risks?
- How it considers existing or likely regulatory requirements or policies, such as emissions limits, when identifying climate-related risks?
- How it considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks?

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311 A registrant would be required to disclose the expected impact of any transition opportunity on its results of operations or financial condition, *e.g.*, increased costs or expenditures, pursuant to proposed 17 CFR 229.1502 to the extent it believes they would be reasonably likely to have a material impact.

- How the registrant determines the materiality of climate-related risks, including how it assesses the potential size and scope of an identified climate-related risk?

Are there other items relevant to a registrant's identification and assessment of climate-related risks that we should require it to disclose instead of or in addition to the proposed disclosure items?

44. When describing the processes for managing climate-related risks, should we require a registrant to disclose, as applicable, as proposed:

- How it decides whether to mitigate, accept, or adapt to a particular risk?
- How it prioritizes climate-related risks?
- How it determines to mitigate a high priority risk?

Are there other items relevant to a registrant's management of climate-related risks that we should require it to disclose instead of or in addition to the proposed disclosure items?

45. Should we require a registrant to disclose whether and how the processes described in response to proposed 17 CFR 229.1503(a) are integrated into the registrant's overall risk management system or processes, as proposed? Should we specify any particular aspect of this arrangement that a registrant should disclose, such as any interaction between, and corresponding roles of, the board or any management committee responsible for assessing climate-related risks, if there is a separate and distinct committee of the board or management, and the registrant's committee in charge, generally, of risk assessment and management?

46. If a registrant has adopted a transition plan, should we require the registrant to describe the plan, including the relevant metrics and targets used to identify and manage physical and transition risks, as proposed? Would this proposed disclosure requirement raise any competitive harm concerns and, if so, how can we mitigate such concerns? Would any of the proposed

disclosure requirements for a registrant's transition plan act as a disincentive to the adoption of such a plan by the registrant?

47. If a registrant has adopted a transition plan, should we require it, when describing the plan, to disclose, as applicable, how the registrant plans to mitigate or adapt to any identified physical risks, including but not limited to those concerning energy, land, or water use and management, as proposed? Are there any other aspects or considerations related to the mitigation or adaption to physical risks that we should specifically require to be disclosed in the description of a registrant's transition plan?

48. If a registrant has adopted a transition plan, should we require it to disclose, if applicable, how it plans to mitigate or adapt to any identified transition risks, including the following, as proposed:

- Laws, regulations, or policies that:
    - Restrict GHG emissions or products with high GHG footprints, including emissions caps; or
    - Require the protection of high conservation value land or natural assets?
- Imposition of a carbon price?
- Changing demands or preferences of consumers, investors, employees, and business counterparts?

Are there any other transition risks that we should specifically identify for disclosure, if applicable, in the transition plan description? Are there any identified transition risks that we should exclude from the plan description?

49. If a registrant has adopted a transition plan, when describing the plan, should we permit the registrant also to discuss how it plans to achieve any identified climate-related opportunities, including, as proposed:

- The production of products that facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure?
- The generation or use of renewable power?
- The production or use of low waste, recycled, or environmentally friendly consumer products that require less carbon intensive production methods?
- The setting of conservation goals and targets that would help reduce GHG emissions?
- The provision of services related to any transition to a lower carbon economy?

Should we require a registrant to discuss how it plans to achieve any of the above, or any other, climate-related opportunities when describing its transition plan?

50. If a registrant has disclosed its transition plan in a Commission filing, should we require it to update its transition plan disclosure each fiscal year by describing the actions taken during the year to achieve the plan's targets or goals, as proposed? Should we require a registrant to provide such an update more frequently, and if so, how frequently? Would the proposed updating requirement act as a disincentive to the adoption of a transition plan by the registrant?

51. To the extent that disclosure about a registrant's transition plan constitutes forward-looking information, the PSLRA safe harbors would apply. Should we adopt a separate safe harbor for transition plan disclosure? If so, what disclosures should such a safe harbor cover and what should the conditions be for such a safe harbor?

F. Financial Statement Metrics

1. Overview

If a registrant is required to file the disclosure required by subpart 229.1500 in a form that also requires audited financial statements,[312] under our proposal it would be required to disclose in a note to its financial statements certain disaggregated climate-related financial statement metrics that are mainly derived from existing financial statement line items.[313] In particular, the proposed rules would require disclosure falling under the following three categories of information:

- Financial Impact Metrics;
- Expenditure Metrics; and
- Financial Estimates and Assumptions.

The proposed financial statement metrics disclosures would involve estimation uncertainties that are driven by the application of judgments and assumptions, similar to other financial statement disclosures (*e.g.*, estimated loss contingencies, fair value measurement of certain assets, etc.). Accordingly, for each type of financial statement metric, the proposed rules would require the registrant to disclose contextual information to enable a reader to understand

[312] For example, the climate-related note to the financial statements would not be required in a Form 10-Q filing. *See* proposed 17 CFR 210.14-01(a). *See infra* note 690 and accompanying text, which discusses the applicability of the proposed rules to foreign private issuers.

[313] *See* FASB Concepts Statement No. 8, Chapter 8, par. D8 ("[T]he primary purpose of notes to financial statements is to supplement or further explain the information on the face of financial statements by providing financial information relevant to existing and potential investors, lenders, and other creditors for making decisions about providing resources to an entity.").

how it derived the metric, including a description of significant inputs and assumptions used, and if applicable, policy decisions made by the registrant to calculate the specified metrics.[314]

A number of existing accounting standards could elicit climate-related disclosure in the financial statements, as highlighted by the FASB in a Staff Educational Paper and by the IFRS in a similar document.[315] Nevertheless, we believe the proposed rules would benefit registrants by specifying when to provide such disclosures. Furthermore, the proposed rules may increase the consistency and comparability of such disclosures by prescribing accounting principles for preparing the proposed climate-related financial statement metrics disclosures, including, among other things, provisions that would specify the basis of calculation for such metrics and their presentation.[316]

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314 *See* proposed 17 CFR 210.14-02(a). Inputs and assumptions may include the estimation methodology used to disaggregate the amount of impact on the financial statements between the climate-related events and activities and other factors. Policy decisions referenced herein may include a registrant's election to disclose the impacts from climate-related opportunities. *See also infra* Section II.F.2 for an example of contextual information that would be required.

315 *See* FASB Staff Educational Paper, Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards (Mar. 2021), available at *https://fasb.org/jsp/FASB/Document_C/DocumentPage&cid=1176176379917*. *See also* IFRS, Effects of climate-related matters on financial statements (Nov. 2020), available at *https://www.ifrs.org/content/dam/ifrs/supporting-implementation/documents/effects-of-climate-related-matters-on-financial-statements.pdf#:~:text=IFRS%20Standards%20do%20not%20refer%20explicitly%20to%20climate-related,significant%20judgements%20and%20estimates%20that%20management%20has%20made*.

316 The Commission has broad authority to set accounting standards and principles. *See, e.g.*, 15 U.S.C. 77s; 15 U.S.C. 7218(c); and *Policy Statement: Reaffirming the Status of the FASB as a Designated Private-Sector Standard Setter*, Release No. 33-8221 (Apr. 25, 2003) [68 FR 23333 (May 1, 2003)], at 23334 ("While the Commission consistently has looked to the private sector in the past to set accounting standards, the securities laws, including the Sarbanes-Oxley Act, clearly provide the Commission with authority to set accounting standards for public companies and other entities that file financial statements with the Commission."). *See also* FASB Accounting Standards Codification ("FASB ASC") Topic 105-10-10-1 ("Rules and interpretive releases of the Securities and Exchange Commission . . . are also sources of authoritative GAAP for SEC registrants.").

To avoid potential confusion, maintain consistency with the rest of the financial statements, and aid comparability, registrants would be required to calculate the proposed financial statement metrics using financial information that is consistent with the scope of the rest of the registrant's consolidated financial statements included in the filing.[317] Therefore, registrants would have to include in any such calculation financial information from consolidated subsidiaries.[318]

For the avoidance of doubt, and to further promote consistency in the preparation of the financial statements, the proposed basis of calculation requirements would also specify that a registrant would be required to apply the same set of accounting principles that it is required to apply in preparation of the rest of its consolidated financial statements included in the filing, whenever applicable.[319] Although 17 CFR 210.4-01(a)(1) already states that financial statements filed with the Commission that are not prepared in accordance with GAAP will be presumed misleading or inaccurate unless the Commission has otherwise provided, clarifying the

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[317] *See* proposed 17 CFR 210.14-01(c)(1).

[318] *See, e.g.*, 17 CFR 210.3-01(a) ("There shall be filed, for the registrant and its subsidiaries consolidated, audited balance sheets as of the end of each of the two most recent fiscal years.").

[319] *See* proposed 17 CFR 210.14-01(c)(2). Foreign private issuers that file consolidated financial statements under home country GAAP and reconcile to U.S. GAAP, would be required to use U.S. GAAP (including the provisions of the proposed rules) as the basis for calculating and disclosing the proposed climate-related financial statement metrics. Foreign private issuers that file consolidated financial statements under IFRS as issued by the IASB, would apply IFRS and the proposed rules as the basis for calculating and disclosing the proposed climate-related financial statement metrics. For simplicity, we do not refer to the corresponding IFRS in each instance where we refer to a FASB ASC. Accordingly, references in this release to a FASB ASC should be read to also refer to the corresponding IFRS for foreign private issuers applying those standards. *See also infra* note 690 which discusses proposed amendments to Form 20-F.

application of this concept in the proposed rules may be helpful, given the possible confusion that may arise between the current body of GAAP and the proposed requirements.[320]

The proposed rules would also require disclosure to be provided for the registrant's most recently completed fiscal year and for the historical fiscal year(s) included in the registrant's consolidated financial statements in the applicable filing.[321] For example, a registrant that is required to include balance sheets as of the end of its two most recent fiscal years and income statements and cash flow statements at the end of its three most recent fiscal years would be required to disclose two years of the climate-related financial statement metrics that correspond to balance sheet line items and three years of the climate-related financial statement metrics that correspond to income statement or cash flow statement line items. If the registrant is an emerging growth company ("EGC")[322] or SRC, only two years would be required.[323]

A registrant, however, would not need to provide a corresponding historical metric for a fiscal year preceding its current reporting fiscal year if it is eligible to take advantage of the accommodation in 17 CFR 230.409 ("Rule 409") or 17 CFR 240.12b-21 ("Rule 12b-21"). For

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320 *See also* 17 CFR 210.4-01(a)(2) (discussing the application of U.S. GAAP, IFRS, and the use of other comprehensive sets of accounting principles (with reconciliation to U.S. GAAP)).

321 *See* proposed 17 CFR 210.14-01(d).

322 An EGC is a registrant that had total annual gross revenues of less than $1.07 billion during its most recently completed fiscal year and has not met the specified conditions for no longer being considered an EGC. *See* 17 CFR 230.405; 17 CFR 240.12b-2; 15 U.S.C. 77b(a)(19); 15 U.S.C. 78c(a)(80); and *Inflation Adjustments and Other Technical Amendments under Titles I and III of the JOBS Act*, Release No. 33- 10332 (Mar. 31, 2017) [82 FR 17545 (Apr. 12, 2017)].

323 An EGC is only required to provide audited statements of comprehensive income and cash flows for each of the two fiscal years preceding the date of the most recent audited balance sheet (or such shorter period as the registrant has been in existence). *See* 17 CFR 210.3-02(a). A similar accommodation is provided to SRCs. *See* 17 CFR 210.8-02.

example, if a registrant has not previously presented such metric for such fiscal year and the historical information necessary to calculate or estimate such metric is not reasonably available to the registrant without unreasonable effort or expense, the registrant may be able to rely on Rule 409 or Rule 12b-21 to exclude a corresponding historical metric. Requiring disclosure of current and, when known or reasonably available, historical periods, should allow investors to analyze trends in the climate-related impacts on the consolidated financial statements and to better evaluate the narrative trend disclosure provided pursuant to proposed Subpart 1500 of Regulation S-K.[324]

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52. Should we require a registrant to provide contextual information, including a description of significant inputs and assumptions used, and if applicable, policy decisions made by the registrant to calculate the specified metrics, as proposed? Should we revise the proposed requirement to provide contextual information to require specific information instead? We provide some examples of contextual information disclosure in Sections II.F.2 and II.F.3 below. Would providing additional examples or guidance assist registrants in preparing this disclosure?

53. The proposed rules would specify the basis of calculation for the climate-related financial statement metrics. Is it clear how to apply these accounting principles when calculating the proposed climate-related financial statement metrics, or should we provide additional guidance? Should we require a registrant to report these metrics with reference to its consolidated financial statements, as proposed? If not, how should registrants report these metrics? If we were to establish accounting principles (*e.g.*, the basis for reporting these metrics) in a manner that

[324] *See supra* Section II.C.

differs from the principles applicable to the rest of the consolidated financial statements, would the application of those principles to the proposed metrics make climate-related disclosures less clear, helpful, or comparable for investors?

54. Should we also require such metrics to be calculated at a reportable segment level when a registrant has more than one reportable segment (as defined by the FASB ASC Topic 280 *Segment Reporting*)? In addition, should we require such metrics to be presented by geographic areas that are consistent with the registrant's reporting pursuant to FASB ASC Topic 280-10-50-41? How would investors use such information?

55. The proposed rules would require disclosure for the registrant's most recently completed fiscal year and for the corresponding historical fiscal years included in the registrant's consolidated financial statements in the filing. Should disclosure of the climate-related financial statement metrics be required for the fiscal years presented in the registrant's financial statements, as proposed? Instead, should we require the financial statement metrics to be calculated only for the most recently completed fiscal year presented in the relevant filing? Would requiring historical disclosure provide important or material information to investors, such as information allowing them to analyze trends? Are there other approaches we should consider?

56. Should information for all periods in the consolidated financial statements be required for registrants that are filing an initial registration statement or providing climate-related financial statement metrics disclosure for historical periods prior to the effective date or compliance date of the rules? Would the existing accommodation in Rules 409 and 12b-21 be sufficient to address any potential difficulties in providing the proposed disclosures in such situations?

57. Should we provide additional guidance as to when a registrant may exclude a historical metric for a fiscal year preceding the current fiscal year?

58. In several instances, the proposed rules specifically point to existing GAAP and, in this release, we provide guidance with respect to the application of existing GAAP. Are there other existing GAAP requirements that we should reference? Are there instances where it would be preferable to require an approach based on TCFD guidance or some other framework, rather than requiring the application of existing GAAP?

2. Financial Impact Metrics

As discussed above, proposed Item 1502(d) of Regulation S-K would require a registrant to provide a narrative discussion of whether and how any of its identified climate-related risks have affected or are reasonably likely to affect the registrant's consolidated financial statements.[325] The term "climate-related risks" would be defined, in part, as the actual or potential negative impacts of climate-related conditions and events on a registrant's consolidated financial statements.[326] "Climate-related risks" would also be defined to include physical risks, such as extreme weather events, and transition risks.[327] To complement this proposed requirement in Regulation S-K to provide narrative disclosure about impacts on a registrant's consolidated financial statements, we are proposing to amend Regulation S-X to require a registrant to include disaggregated information about the impact of climate-related conditions

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[325] *See* proposed 17 CFR 229.1502(d).

[326] *See supra* Section II.B.1 (discussing the definition of "climate-related risks").

[327] *See* proposed 17 CFR 229.1500(c) (defining "climate related risks" to include "physical risks" and "transition risks").

and events, and transition activities, on the consolidated financial statements included in the relevant filing,[328] unless such impact is below a specified threshold.

We are proposing to require disclosure of the impacts from severe weather events and other natural conditions and transition activities, which should capture a broad spectrum of these two types of climate-related risks (physical risks and transition risks). In addition, the proposed rules would require disclosure of the impacts of any climate-related risks identified pursuant to proposed Item 1502(a)—both physical risks ("identified physical risks") and transition risks ("identified transition risks")—on any of the financial statement metrics.[329] Among the examples of severe weather events and other natural conditions that we have highlighted in the proposed rule are those that the Commission identified more than a decade ago in the 2010 Guidance as potentially affecting a registrant's operations and results.[330] In addition, although not specifically mentioned in the 2010 Guidance, we are including wildfires as an example because it is well recognized as another type of natural event that can have significant impacts on a registrant's financial statements.[331] Providing examples of severe weather events, other natural

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328 For example, the impact on the income statement line items for the periods presented in the financial statements in a registrant's Form 10-K.

329 *See* proposed 17 CFR 210.14-02(i).

330 *See, e.g.*, 2010 Guidance, 26 ("Significant physical effects of climate change, such as effects on the severity of weather (for example, floods or hurricanes), [and] sea levels . . . have the potential to affect a registrant's operations and results."). Temperature extremes and drought are also discussed in the 2010 Guidance. *See, e.g.*, *id.* at 6-7.

331 *See, e.g.*, Aurora A. Gutierrez et al., *Wildfire response to changing daily temperature extremes in California's Sierra Nevada*, Science Advances, Vol. 7, Issue 47 (Nov. 17, 2021) ("Our work supports the conclusion that considerable potential exists for an increase in fire activity as a consequence of climate warming in the absence of changes in fire and ecosystem management."); U.S. Geological Survey, *Will global warming produce more frequent and more intense wildfires?* ("[R]esearchers have found strong correlations between warm summer temperatures and large fire years, so there is general consensus that fire occurrence will increase with climate change."), available at https://www.usgs.gov/faqs/will-global-warming-produce-more-frequent-and-more-intense-wildfires.

conditions, and transition activities in the proposed rule would aid in the comparability of the resulting disclosure while assisting issuers in making the disclosures.

Specifically, we are proposing that impacts on any relevant line item in the registrant's consolidated financial statements during the fiscal years presented arising from severe weather events and natural conditions, and the identified physical risks (collectively, "climate-related events"), would trigger the proposed disclosure requirement discussed below. Specific examples of such severe weather events and natural conditions may include the following:

- Flooding;
- Drought;
- Wildfires;
- Extreme temperatures; and
- Sea level rise.[332]

As discussed, above, there has been increased recognition of the current and potential effects, both positive and negative, of these events and the associated physical risks on a registrant's business as well as its financial performance and position. For example, as mentioned above, the 2010 Guidance discusses the potential impacts on a registrant's business and financial performance from climate-related events, including, for example, severe weather events, that could negatively impact a registrant's supply chain or distribution chain and lead to higher input costs or delayed product deliveries.[333] The 2010 Guidance also points to credit risks

[332] *See* proposed 17 CFR 210.14-02(c).

[333] *See* 2010 Guidance, 6.

for banks driven by borrowers with assets located in high risk coastal areas.[334] More recently, the FSOC's Report on Climate-Related Financial Risk 2021 discusses significant costs from the types of events included in proposed Rule 14-02(c).[335] The TCFD, in a recent publication, also discusses the potential financial impacts of such climate-related events.[336] Furthermore, the TCFD provides examples of disclosures already being made by some companies (including registrants) of the financial statement impact of the climate-related events discussed above in their standalone sustainability (or equivalent) reports.[337]

Generally, climate-related events such as severe weather events and other natural conditions, and climate-related risks more generally, are linked to negative impacts on a registrant's financial performance and position. There could be situations, however, where such events result in positive impacts. For example, if a registrant's business is to conduct post-disaster cleanup and reconstruction, the occurrence of such severe weather events would generate additional revenues for the registrant.

In addition to the physical risks associated with climate change, registrants and investors also face climate-related transition risks. As government leaders across the globe have made

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[334] *See id*.

[335] *See, e.g.*, 2021 FSOC Report, Chapter 1: *From Climate-related Physical Risks to Financial Risks* (discussing the listed events and other risks).

[336] TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (Oct. 2021), Section A.4 *Assessing Financial Impacts of Climate-Related Risks and Opportunities*.

[337] *See, e.g.*, TCFD, Guidance on Metrics, Targets, and Transition Plans (Oct. 2021), 23 (Figure C6), Appendix 2, available at https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf (providing examples, mostly from sustainability (or equivalent) reports, that illustrate the feasibility of some of the disclosures that would be required by the proposed rules).

public commitments to transition to a lower carbon economy, investors have sought information about the impact such a transition may have on registrants.[338] In addition to public commitments, these impacts may be prompted by regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors.[339] For example, significant shifts in modes of production may occur in GHG intensive economic sectors, such as the transportation, electricity generation, and heavy manufacturing sectors.[340] A registrant that is engaged in transition activities may experience business losses or, conversely, may benefit from such transition activities.[341] In response, some companies are already providing disclosure of the impact of transition-related activities on their financial statements and some have publicly made commitments related to this transition.[342] In light of these transition risks, the proposed rules would also require a registrant to disclose the financial impact of the impact of any identified transition risks and any efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks (collectively, "transition activities") on any relevant line items in the registrant's consolidated financial statements during the fiscal years presented.[343]

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[338] *See supra* Section I.C.1.

[339] *See supra* Section II.B.

[340] *See, e.g.*, 2021 FSOC Report, Chapter 1, *From Climate-related Transition Risks to Financial Risks*.

[341] *See id*.

[342] *See, e.g.*, TCFD, Guidance on Metrics, Targets, and Transition Plans (Oct. 2021), Appendix 2.

[343] *See* proposed 17 CFR 210.14-02(d).

A registrant may also disclose the impact of any opportunities arising from severe weather events and other natural conditions, any impact of efforts to pursue climate-related opportunities associated with transition activities, and the impact of any other climate-related opportunities, including those identified by the registrant pursuant to proposed Item 1502(a), on any of the financial statement metrics.[344] If a registrant makes a policy decision to disclose the impact of a climate-related opportunity on the proposed financial statement metrics, it must do so consistently (*e.g.,* for each fiscal year presented in the consolidated financial statements, for each financial statement line item, for all relevant opportunities identified by the registrant) and must follow the same presentation and disclosure threshold requirements applicable to the required disclosures related to financial impact metrics and expenditure metrics, as discussed below.[345]

The financial impact metric disclosure requirements in proposed Rules 14-02(c), (d), and (i) would require a registrant to disclose the financial impacts of severe weather events, other natural conditions, transition activities, and identified climate-related risks on the consolidated financial statements included in the relevant filing unless the aggregated impact of the severe weather events, other natural conditions, transition activities, and identified climate-related risks is less than one percent of the total line item for the relevant fiscal year.[346] The proposed threshold would provide a bright-line standard for registrants and should reduce the risk of

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[344] *See* proposed 17 CFR 210.14-02(j).

[345] *See id.*

[346] *See* proposed 17 CFR 210.14-02(b). The registrant would be required to evaluate the impact on a line-by-line basis consistent with the line items presented in its consolidated financial statements. *See* proposed 17 CFR 210.14-02(c) and (d).

underreporting such information. The proposed quantitative threshold could also promote comparability and consistency among a registrant's filings over time and among different registrants compared to a principles-based approach. The Commission has used similar one percent thresholds in other contexts.[347] More generally, in addition to the approach in Article 5 of Regulation S-X discussed below, other rules such as 17 CFR 229.103 and 17 CFR 229.404 use quantitative disclosure thresholds to facilitate comparability, consistency, and clarity in determining when information must be disclosed.[348]

A registrant would be required to determine the impacts of the severe weather events, other natural conditions, transition activities, and identified climate-related risks described above on each consolidated financial statement line item.[349] Within each category (*i.e.*, climate-related events or transition activities), impacts would, at a minimum, be required to be disclosed on an aggregated, line-by-line basis for all negative impacts and, separately, on an aggregated, line-by-line basis for all positive impacts.[350] However, for purposes of determining whether the disclosure threshold has been met, a registrant would be required to aggregate the absolute value

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347 The Commission currently uses a 1% threshold in other contexts for disclosure of certain items within the financial statements and without. *See, e.g.*, 17 CFR 210.5-03.1(a) (stating that if the total of sales and revenues reported under this caption includes excise taxes in an amount equal to 1% or more of such total, the amount of such excise taxes shall be shown on the face of the statement parenthetically or otherwise); 17 CFR 210.12-13 (requiring disclosure of open option contracts by management investment companies using a 1% of net asset value threshold, based on the notional amounts of the contracts); and 17 CFR 229.404(d) (requiring disclosure of transactions between a SRC and related persons in which the amount involved exceeds the lesser of $120,000 or 1% of the average of the SRC's total assets at year end for the last two completed fiscal years).

348 *See* 17 CFR 229.103(b)(2), (c)(3)(iii) and 17 CFR 229.404(a).

349 Examples of such line items include revenue, cost of revenue, selling, general and administrative expenses, sale of property, plant, and equipment (in statement of cash flows), inventories, intangible assets, long-term debt, or contingent liabilities.

350 *See* proposed 17 CFR 210.14-02(c) and (d).

of the positive and negative impacts on a line-by-line basis, which we believe would better reflect the significance of the impact of the climate-related events and transition activities on a registrant's financial performance and position.[351]

For example, when evaluating the line-by-line impact, a registrant may determine that its cost of revenue is impacted by Events A, B, and C, and Transition Activity D in the following manner:

- Cost of revenue was impacted negatively by Events A and B by $300,000, driven by increased input costs impacted by severe weather events that strained the registrant's main supplier;
- Cost of revenue was impacted positively by Event C by $70,000, driven by technology that improved the registrant's ability to manage the impact of severe heat on certain raw materials, which resulted in more efficient production; and
- Cost of revenue was impacted positively by Transition Activity D, which reduced production costs for certain products by $90,000 through advanced technology that improved energy efficiency during the production process.[352]

For purposes of determining whether the impacts from the example above would trigger the disclosure threshold requirements, the registrant would perform the analysis illustrated in the following table:

F/S line-item	F/S balance (from consolidated financial statements)	Impact of Events A and B	Impact of Event C	Impact of Transition Activity D	Absolute value of impacts	Percentage impact
Cost of revenue	$10,000,000	-$300,000	+$70,000	+$90,000	$460,000	4.6%

351 *See* proposed 17 CFR 210.14-02(b).

352 This example illustrates a situation where the registrant has elected to include impacts from transition opportunities.

Although some of the impacts (*e.g.*, impact of Event C, impact of Transition Activity D) do not individually meet the one percent threshold, the absolute value of the aggregated impacts from the events and transition activities on the line item in the above example is $460,000 and thus exceeds one percent of the corresponding line-item threshold; therefore, disclosure for that specific line item would be required. The registrant's disclosure of such impacts may be provided, for example, as illustrated in the following table (excluding disclosure of contextual information):

Note X. Climate-related financial metrics:

F/S line-item	Total negative impact from climate-related events	Total positive impact from climate-related events	Total negative impact from climate-related transition activities	Total positive impact from climate-related transition activities and climate-related opportunities*
Cost of revenue	(Debit) $300,000	(Credit) $70,000	---	(Credit) $90,000

* As discussed earlier, a registrant may elect to include the impact of climate-related opportunities when calculating its climate-related financial impact metrics. This example illustrates a situation where the registrant has elected to include impacts from transition opportunities.

In this example, contextual information may include disclosure such as the registrant's election to include the impact from opportunities in its disclosure analysis and calculation, the specific events that were aggregated for purposes of determining the impact on the cost of revenue and, if applicable, a discussion of the estimation methodology used to disaggregate the amount of impact on the cost of revenue between the climate-related events, transition activities, and other factors.

To provide additional clarity, the proposed rule would include the following examples of disclosures that may be required to reflect the impact of the severe weather events and other natural conditions on each line item of the registrant's consolidated financial statements (*e.g.*, line items of the consolidated income statement, balance sheet, or cash flow statement):[353]

- Changes to revenue or costs from disruptions to business operations or supply chains;
- Impairment charges and changes to the carrying amount of assets (such as inventory, intangibles, and property, plant and equipment) due to the assets being exposed to severe weather, flooding, drought, wildfires, extreme temperatures, and sea level rise;
- Changes to loss contingencies or reserves (such as environmental reserves or loan loss allowances) due to impact from severe weather events; and
- Changes to total expected insured losses due to flooding or wildfire patterns.[354]

With respect to the financial impacts of transition activities, the proposed rule would include the following examples of potential impacts:

- Changes to revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract;
- Changes to operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials;
- Changes to the carrying amount of assets (such as intangibles and property, plant, and equipment), for example, due to a reduction of the asset's useful life or a change in the asset's salvage value by being exposed to transition activities; and

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[353] The examples below, like all of the examples in this release (including examples in the text of the proposed rules), are non-exclusive and should not be interpreted as a checklist for compliance with any proposed rule.

[354] *See* proposed 17 CFR 210.14-02(c)(1) through (4).

- Changes to interest expense driven by financing instruments such as climate-linked bonds issued where the interest rate increases if certain climate-related targets are not met.[355]

Many commenters stated that climate-related financial disclosure is material and should be reflected separately in the financial statements.[356] For example, one commenter stated that it is critical to investors and others in assessing a company's risk profile, estimating its risk-adjusted returns, and completing other relevant financial analyses to include information on how climate-related risks and climate-related opportunities may affect companies' income statements, cash flow statements, and balance sheets.[357]

Other commenters, however, generally expressed the view that if such disclosures are material, they would already be required by existing financial statement disclosure requirements.[358] For example, some of these commenters stated that they opposed new climate-specific disclosure rules because, in their view, the traditional concept of materiality already

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[355] *See* proposed 17 CFR 210.14-02(d)(1) through (4).

[356] *See, e.g.*, letters from Americans for Financial Reform Education Fund *et al*.; BlackRock; CalPERS; Ceres; Climate Accounting Project; Climate Governance Initiative; Eni SpA; Friends of the Earth, Amazon Watch and RainForest Coalition; Initiative on Climate Risk and Resilience Law; International Corporate Governance Network; Investment Company Institute; Natural Resources Defense Council; Policy Working Group; Sens. Brian Schatz and Sheldon Whitehouse (June 10, 2021); Ted Atwood; The Forum for Sustainable and Responsible Investment; The Revolving Door Project; The Washington State Investment Board; UNEP – FI; Union of Concerned Scientists; and WBCSD.

[357] *See* letter from Bloomberg.

[358] *See, e.g.*, letters from the American Fuel Petrochemical Manufacturers (June 13, 2021); Environmental Bankers Association; Heritage Foundation; National Mining Association (June 11, 2021); Society for Mining, Metallurgy, & Exploration (June 13, 2021); and The Associated General Contractors of America.

requires the disclosure of climate-related impacts that materially affect the issuer's financial condition and results of operations.[359]

Although we agree that registrants are currently required to disclose material financial impacts on the financial statements, the proposed climate-related financial statement metrics should provide additional transparency into the impact of climate-related events on information reported in the financial statements that would be relevant to investors when making investment or voting decisions.[360] Such disclosure would also provide investors with additional insights into the nature of a registrant's business, the implementation of the registrant's targets and goals, and material trends in climate-related impacts. Furthermore, separately stating the financial statement impacts from the climate-related events and transition activities could improve comparability across both the registrant's year-to-year disclosures and the disclosures of different registrants.

We further note that the proposed requirement to separately disclose the financial impacts of the climate-related events and transition activities may be necessary not only because climate-related risks may have significant impacts on individual registrants, but also because the risks presented by the climate-related events and transition activities may be correlated across

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[359] *See* letters from American Fuel Petrochemical Manufacturers; Environmental Bankers Association; and The Associated General Contractors of America.

[360] Certain commenters, in response to FASB's 2021 Agenda Consultation, were also supportive of more disaggregated disclosures within the financial statements. *See, e.g.,* letters from CalPERS (Sept. 22, 2021); CFA Institute (Oct. 7, 2021); and CII (Sept. 16, 2021). Comment letters in response to FASB's invitation to comment are available at https://www.fasb.org/jsp/FASB/CommentLetter_C/CommentLetterPage&cid=1218220137090&project_id=2021-004&page_number=1.

different, similarly situated registrants.[361] Climate-related risks present the potential for a high correlation and therefore concentration of risk within a portfolio. Separate disclosure of climate-related risks could help to provide investors with information to help them more effectively evaluate their portfolio risk. In this regard, we note that an analogous approach to disaggregated, or separately stated, disclosure has been taken in other contexts within the financial statements and elsewhere.[362] For example, in segment reporting, a registrant must present within its consolidated financial statements a separate presentation of certain financial statement line items for each segment.[363] The Commission has noted the importance of disaggregated disclosure in

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[361] *See, e.g.*, Madison Condon, *Market Myopia's Climate Bubble,* 2022 UTAH L. REV. 63 (2021). *See also* 2020 CFTC Advisory Subcommittee Report ("Climate change is expected to affect multiple sectors, geographies, and assets in the United States, sometimes simultaneously and within a relatively short timeframe. As mentioned earlier, transition and physical risks—as well as climate and non-climate-related risks—could interact with each other, amplifying shocks and stresses. This raises the prospect of spillovers that could disrupt multiple parts of the financial system simultaneously.").

[362] The analogies presented are not intended to imply that FASB ASC Topic 280, IFRS 8 or other concepts would have to be applied when accounting for and disclosing the climate-related financial statement metrics. The analogies are also not intended to imply that the determination of when disclosure may be required and how that determination is made is the same across all of these concepts. *See, e.g.*, *infra* note 363 (discussing management's evaluation under FASB ASC Topic 280 *Segment Reporting* and IFRS 8 *Operating Segments*) and the discussion below of FASB ASC Topic 606, IFRS 15, and Article 5 of Regulation S-X.

[363] *See* FASB ASC Topic 280 *Segment Reporting* and IFRS 8 *Operating Segments* (requiring segment reporting disclosures to be included in the audited financial statements). FASB ASC 280-10-10-1 states that the objective of segment reporting is to provide information about the different types of business activities in which a registrant engages and the different economic environments in which it operates to help users of financial statements: (i) better understand the public entity's performance; (ii) better assess its prospects for future net cash flows; and (iii) make more informed judgments about the public entity as a whole. FASB ASC Topic 280 and IFRS 8 focus on the chief operating decision maker's view when evaluating the registrant and prescribes certain qualitative and quantitative considerations when determining what constitutes an operating segment. Similarly, the proposed rule would require an initial determination by the registrant of the relevant climate-related events and transition activities, and their impact on the registrant's financial statements.

the segment reporting context, stating that it "has long been aware of the importance of meaningful segment information to reasoned investment decision-making."[364]

The importance of disaggregated disclosure in a registrant's financial statements is also supported by the concepts set forth in FASB ASC Topic 606 *Revenue from Contracts with Customers* and IFRS 15 *Revenue from Contracts with Customers*, which require, among other things, disclosure of disaggregated revenue recognized from contracts with customers into categories that depict how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. As noted earlier, the Commission also requires disaggregation of certain financial statement line items in Article 5 of Regulation S-X. Specifically, Article 5 requires separate disclosures of specific balance sheet and income statement line items when practicable or when certain percentage thresholds are met, depending on the nature of the information.[365] Those conditions on when separate disclosure is required are analogous to the proposed condition that financial impacts result from the climate-related events and transition activities.

Request for Comment

59. Should we require registrants to disclose the financial impact metrics, as proposed? Would presenting climate-specific financial information on a separate basis based on climate-related events (severe weather events and other natural conditions and identified physical risks)

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[364] *See Industry and Homogenous Geographic Segment Reporting*, Release No. 33-6514 (Feb. 15, 1984) [49 FR 6737-01 (Feb. 23, 1984)], at 6738. Robust segment reporting disclosures are important as they can provide crucial transparency to investors that are reviewing financial statements. *See also* Gary Buesser, *For the Investor: Segment Reporting*, FASB OUTLOOK (Apr. 2019) ("[I]nvestors normally model a company at the segment level rather than at the consolidated level. More segments and greater information about an operating segment improve an analyst's ability to forecast a company's revenue, margins and assets – which serves as the basis for valuing a company.").

[365] *See supra* note 347 for examples of the Commission's use of a 1% threshold in other contexts.

and transition activities (including identified transition risks) elicit decision-useful or material information for investors? Are there different metrics that would result in disclosure of more useful information about the impact of climate-related risks and climate-related opportunities on the registrant's financial performance and position?

60. Would the impact from climate-related events and transition activities yield decision-useful information for investors? Would the climate-related events (including the examples provided) and transition activities result in impacts that are easier to quantify or disaggregate than climate-related risks more generally? Would a registrant be able to quantify and provide the proposed disclosure when the impact may be the result of a mixture of factors (*e.g.*, a factory shutdown due to an employee strike that occurs simultaneously with a severe weather event)? If there are situations where disaggregation would not be practicable, should we require a registrant to disclose that it was unable to make the required determination and why, or to make a reasonable estimate and provide disclosure about the assumptions and information that resulted in the estimate?

61. Alternatively, should we not require disclosure of the impacts of identified climate-related risks and only require disclosure of impacts from severe weather events and other natural conditions? Should we require a registrant to disclose the impact on its consolidated financial statements of only certain examples of severe weather events and other natural conditions? If so, should we specify which severe weather events and other natural conditions the registrant must include? Would requiring disclosure of the impact of a smaller subset of climate-related risks be easier for a registrant to quantify without sacrificing information that would be material to investors?

62. Should impact from climate-related opportunities be required, instead of optional, as proposed? We are proposing to require a registrant that elects to disclose the impact of an opportunity to do so consistently (*e.g.,* for each fiscal year presented in the consolidated financial statements, for each financial statement line item, and for all relevant opportunities identified by the registrant). Are there any other requirements that we should include to enhance consistency? Should we only require consistency between the first fiscal period in which opportunities were disclosed and subsequent periods?

63. Is it clear which climate-related events would be covered by "severe weather events and other natural conditions"? If not, should we provide additional guidance or examples about what events would be covered? Should we clarify that what is considered "severe weather" in one region may differ from another region? For example, high levels of rainfall may be considered "severe weather" in a typically arid region.

64. Are the proposed requirements for calculating and presenting the financial impact metrics clear? Should the analysis be performed and disclosed in a manner other than on a line-by-line basis referring to the line items of the registrant's consolidated financial statements?

65. We are proposing to allow a registrant to aggregate the absolute value of negative and positive impacts of all climate-related events and, separately, transition activities on a financial statement line item. Should we instead require separate quantitative disclosure of the impact of each climate-related event or transition activity? Should we require separate disclosure of the impact of climate-related opportunities that a registrant chooses to disclose?

66. The proposed financial impact metrics would not require disclosure if the absolute value of the total impact is less than one percent of the total line item for the relevant fiscal year. Is the proposed threshold appropriate? Should we use a different percentage threshold (*e.g.*, three

percent, five percent) or use a dollar threshold (*e.g.*, less than or greater than $1 million)? Should we use a combination of a percentage threshold and a dollar threshold? Should we only require disclosure when the financial impact exceeds the threshold, as proposed, or should we also require a determination of whether an impact that falls below the proposed quantitative threshold would be material and should be disclosed?

67. For purposes of determining whether the disclosure threshold has been met, should impacts on a line item from climate-related events and transition activities be permitted to offset (netting of positive and negative impacts), instead of aggregating on an absolute value basis as proposed? Should we prescribe how to analyze positive and negative impacts on a line item resulting from the same climate-related event or the same transition activity (*e.g.*, whether or not netting is permitted at an event or activity level)? Should we permit registrants to determine whether or not to offset as a policy decision (netting of the positive and negative impact within an event or activity) and provide relevant contextual information? Should we require the disclosure threshold to be calculated separately for the climate-related events and transition activities, rather than requiring all of the impacts to be aggregated as proposed?

68. Instead of including a quantitative threshold, as proposed, should we require disaggregated disclosure of *any* impact of climate-related risks on a particular line item of the registrant's consolidated financial statements? Alternatively, should we just use a materiality standard?

69. Should we require a registrant to disclose changes to the cost of capital resulting from the climate-related events? If so, should we require a registrant to disclose its weighted average cost of capital or any internal cost of capital metrics? Would such disclosure elicit decision-useful or material information for investors?

70. We have not proposed defining the term “upstream costs” as used in the proposed examples for the financial impact metrics and elsewhere. Should we define that term or any others? If so, how should we define them?

71. Are the proposed examples in the financial impact metrics helpful for understanding the types of disclosure that would be required? Should we provide different or additional examples or guidance?

3. Expenditure Metrics

The proposed expenditure metrics would refer to the positive and negative impacts associated with the same climate-related events, transition activities, and identified climate-related risks as the proposed financial impact metrics.[366] As proposed, the expenditure metrics would require a registrant to separately aggregate amounts of (i) expenditure expensed and (ii) capitalized costs incurred during the fiscal years presented.[367] For each of those categories, a registrant would be required to disclose separately the amount incurred during the fiscal years presented (i) toward positive and negative impacts associated with the climate-related events (*i.e.,* severe weather events and other natural conditions and identified physical risks) and (ii) toward transition activities, specifically, to reduce GHG emissions or otherwise mitigate exposure to transition risks (including identified transition risks).[368] The registrant may also choose to disclose the impact of efforts to pursue climate-related opportunities associated with transition activities.[369] As discussed above, if a registrant elects to disclose the impact of an

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366 *See* proposed 17 CFR 210.14-02(e), (f), and (i).

367 *See id.* These metrics are focused on expenditures (spending) incurred in each reported fiscal year(s). We therefore believe the number of periods of the expenditure metrics should correspond to the number of years of income statement or cash flow statement presented in the consolidated financial statements.

368 *See id*.

369 *See* proposed 17 CFR 210.14-02(j).

opportunity, it must do so consistently and must follow the same presentation and disclosure threshold requirements applicable to the required disclosures of expenditure metrics associated with transition risks. The amount of expenditure disclosed pursuant to the proposed metrics would be a portion, if not all, of the registrant's total recorded expenditure (expensed or capitalized), as calculated pursuant to the accounting principles applicable to the registrant's financial statements.[370]

The proposed expenditure metrics would be subject to the same disclosure threshold as the financial impact metrics, which we believe would promote comparability, consistency, and clarity in determining when information must be disclosed. For purposes of calculating the disclosure threshold for the expenditure metrics, a registrant would be permitted to separately determine the amount of expenditure expensed and the amount of expenditure capitalized; however, a registrant would be required to aggregate expenditure related to climate-related events and transition activities within the categories of expenditure (*i.e.,* amount capitalized and amount expensed). This approach should better reflect the significance of climate-related expenditure compared to a calculation approach that would allow for a disclosure threshold to be measured at the individual event or activity level, which may result in more limited disclosures.

For example, assume a registrant capitalized \$200,000 of expenditure incurred related to Event D and capitalized another \$100,000 of expenditure incurred related to Activity E. The registrant also expensed \$25,000 of expenditure incurred related to Event F (which is an identified transition risk disclosed by the registrant). The registrant would determine whether the

[370] *See* 17 CFR 210.4-01(a)(1) and (2).

impacts would trigger the disclosure requirements based on the proposed thresholds, as illustrated below:

Expenditure category	Current fiscal year balances (from consolidated financial statements)*	Event D	Activity E	Event F	Percentage impact
Capitalized costs (total expenditure incurred during the year that was capitalized)	$8,000,000	$200,000	$100,000		3.85%**
Expense (total expenditure incurred during the year that was expensed)	$3,000,000			$25,000	0.8%

*As expenditures capitalized and expensed are recorded in various financial statement line items, we expect the "total" to be used for disclosure threshold calculation purposes for each category to represent the aggregated expenditures capitalized during the fiscal year and aggregated expenditures expensed during the fiscal year. See below for additional discussion regarding associated contextual information that may be required.

**Calculated based on total impact on capitalized costs from Event D ($200,000), Activity E ($100,000), and Event F ($0): $300,000/$8,000,000.

In the above example, the expenditure incurred toward Event D was $200,000 (capitalized) and the expenditure incurred toward Activity E and Event F were $100,000 (capitalized) and $25,000 (expensed). The amount of capitalized costs equaled the proposed one percent threshold, and thus the disclosure would be required for that category of expenditure. No disclosure would be required for the expenditure incurred that was expensed (related to Event F in this example), because it was below the one percent threshold. The registrant's resulting disclosure of such expenditure (capitalized or expensed) may be provided, for example, as illustrated in the following table (excluding disclosure of contextual information):

Note X. Climate-related financial metrics:

	Expenditure incurred for climate-related events	Expenditure incurred for climate-related transition activities
Capitalized costs	$200,000	$100,000

In this example, contextual information may include disclosure such as the specific climate-related events and transition activities that were aggregated for purposes of determining the impacts on the capitalized or expensed expenditure amounts and, if applicable, policy decisions made by a registrant to determine the amount of climate-related events or transition activities that are categorized as expenditure capitalized versus expenditure expensed or whether impact from pursuing any climate-related opportunities are included in the analysis. Contextual information may also include a discussion of the composition of the total expenditure expensed and total expenditure capitalized, which were used to calculate whether the disclosure threshold was met, and, if applicable, a discussion of the estimation methodology used to disaggregate the amount of impact between the climate-related events, transition activities, and other factors, including if an event or an activity impacted both capitalized and expensed costs.

The proposed rules would clarify that a registrant may be required to disclose the amount of expenditure expensed or capitalized costs, as applicable, incurred for the climate-related events to increase the resilience of assets or operations, retire or shorten the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations.[371] The proposed rules would also clarify that a registrant may be required to disclose the amount of expenditure expensed or capitalized costs, as applicable, incurred for climate-related transition activities related to research and development of new technologies, purchase of assets,

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[371] *See* proposed 17 CFR 210.14-02(e).

infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, offset emissions (purchase of energy credits), or improve other resource efficiency.[372]

Several commenters recommended taking a similar approach, stating that we should require disclosure of climate-related capital expenditure (*i.e.*, capitalized assets),[373] or both climate-related expenses and capitalized assets.[374] Consistent with these comments, and for similar reasons to those stated above with respect to the financial impact metrics, separate disclosure of total expense and total capitalized costs incurred toward the climate-related events and transition activities should provide important information to help investors make better informed investment or voting decisions. Moreover, the financial impacts of expenditure typically appear in different places within the financial statements (*e.g.*, in an asset line item(s) on the balance sheet or in an expense line item(s) in the income statement). The proposed approach is intended to address this dispersed presentation by requiring registrants to first identify the relevant climate-related expenditures and then compile those impacts in one location. Similar to the proposed financial impact metrics, such an approach should provide insight into, and context for understanding, the nature of a registrant's business, including any disclosed strategy for addressing and managing the specified risks—particularly in the context of transition planning.[375]

Request for Comment

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372 *See* proposed 17 CFR 210.14-02(f).

373 *See, e.g.*, letters from Amalgamated Bank; Interfaith Center on Corporate Responsibility; and Natural Resources Defense Council.

374 *See, e.g.*, letters from Calvert; Climate Risk Disclosure Lab; and World Benchmarking Alliance.

375 *See supra* Section II.C, which discusses our proposals to require the registrant to describe the actual and potential impacts of the identified climate-related risks (and climate-related opportunities if the registrant elects to do so) on its strategy, business model, and outlook. Further, such disclosure could also provide additional context to other narrative disclosures such as the discussion of risk factors required by 17 CFR 229.105.

72. Should we require registrants to disclose the expenditure metrics, as proposed? Would presenting the expenditure metrics separately in one location provide decision-useful information to investors? Is there a different type of metric that would result in more useful disclosure of the expense or capitalized costs incurred toward climate-related events and transition activities or toward climate-related risks more generally?

73. Would the disclosure required by the expenditure metrics overlap with the disclosure required by the financial impact metrics? If so, should we require the disclosure to be provided pursuant to only one of these types of metrics?

74. Should the same climate-related events (including severe weather events and other natural conditions and identified physical risks) and transition activities (including identified transition risks) that we are proposing to use for the financial impact metrics apply to the expenditure metrics, as proposed? Alternatively, should we not require a registrant to disclose expenditure incurred towards identified climate-related risks and only require disclosure of expenditure relating to severe weather events and other natural conditions? Should we require a registrant to disclose the expenditure incurred toward only certain examples of severe weather events and other natural conditions? If so, should we specify which severe weather events and other natural conditions the registrant must include? Would requiring disclosure of the expenditure relating to a smaller subset of climate-related risks be easier for a registrant to quantify without sacrificing information that would be material to investors?

75. Should the proposed rules instead require a registrant to disclose the aggregate amounts of expensed and capitalized costs incurred toward *any* climate-related risks? Should expenditures incurred towards climate-related opportunities be optional based on a registrant's election to disclose such opportunities, as proposed?

76. Should we apply the same disclosure threshold to the expenditure metrics and the financial impact metrics? Is the proposed threshold for expenditure metrics appropriate? Should we use a different percentage threshold (*e.g.*, three percent, five percent) or use a dollar threshold (*e.g.*, less than or greater than $1 million)? Should we use a combination of a percentage threshold and a dollar threshold? Should we only require disclosure when the amount of climate-related expenditure exceeds the threshold, as proposed, or should we also require a determination of whether an amount of expenditure that falls below the proposed quantitative threshold would be material and should be disclosed? Should we require separate aggregation of the amount of expense and capitalized costs for purposes of the threshold, as proposed? Should we require separate aggregation of expenditure relating to the climate-related events and transition activities, as proposed?

77. Instead of including a quantitative threshold, as proposed, should we require disaggregated disclosure of *any* amount of expense and capitalized costs incurred toward the climate-related events and transition activities, during the periods presented? Alternatively, should we just use a materiality standard?

78. Are the proposed requirements for calculating and presenting the expenditure metrics clear? Should the analysis be performed and disclosed in a different manner, other than separately based on capitalized costs and amount of expenditure expensed and separately based on the climate-related events and transition activities? Should disclosure of expenditure incurred be required for both the amount of capitalized costs and the amount of expenditure expensed if only one of the two types of expenditure meets the disclosure threshold? Should we require separate disclosure of expenditure incurred toward each climate-related event and transition activity?

79. The proposed rule does not specifically address expensed or capitalized costs that are *partially* incurred towards the climate-related events and transition activities (*e.g.,* the expenditure relates to research and development expenses that are meant to address both the risks associated with the climate-related events and other risks). Should we prescribe a particular approach to disclosure in such situations? Should we require a registrant to provide a reasonable estimate of the amount of expense or capitalized costs incurred toward the climate-related events and transition activities and to provide disclosure about the assumptions and information that resulted in the estimate?

80. Are the proposed terms and examples used in the expenditure metrics helpful for understanding the types of disclosures that would be required? Should we provide different or additional examples?

4. Financial Estimates and Assumptions

The proposed rules would require a registrant to disclose whether the estimates and assumptions used to produce the consolidated financial statements were impacted by exposures to risks and uncertainties associated with, or known impacts from, climate-related events (including identified physical risks and severe weather events and other natural conditions), such as flooding, drought, wildfires, extreme temperatures, sea level rise.[376] If so, the registrant would be required to provide a qualitative description of how such events have impacted the development of the estimates and assumptions used by the registrant in the preparation of such

[376] *See* proposed 17 CFR 210.14-02(g) and (i).

financial statements. Similar to the other proposed financial statement metrics, the proposed rules would include a provision that would require separate disclosure focused on transition activities (including identified transition risks).[377] Further, if a registrant elects to disclose the impact of an opportunity on its financial estimates and assumptions, it must do so consistently and must follow the same presentation and disclosure requirements applicable to the required disclosures herein.[378]

If the estimates and assumptions a registrant used to produce the consolidated financial statements were impacted by risks and uncertainties associated with, or known impacts from, a potential transition to a lower carbon economy or any climate-related targets it has disclosed, the registrant would be required to provide a qualitative description of how the development of the estimates and assumptions were impacted by such a potential transition or the registrant's disclosed climate-related targets.

Estimates and assumptions are currently required for accounting and financial reporting purposes (*e.g.*, projected financial information used in impairment calculations, estimated loss contingencies, estimated credit risks, commodity price assumptions, etc.). The proposed disclosures could provide decision-useful information and transparency to investors about the impact of the climate-related events and transition activities, including disclosed targets and goals,[379] on such estimates and assumptions. Moreover, in addition to providing insight into

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[377] *See* proposed 17 CFR 210.14-02(h) and (i).

[378] *See* proposed 17 CFR 210.14-02(j).

[379] *See* proposed 17 CFR 229.1506.

impacts on the registrant's financial statements, such disclosure could allow investors to evaluate the reasonableness of the registrant's estimates and assumptions, which are used to prepare the registrant's financial statements. Although current accounting standards require registrants to consider how climate-related matters may intersect with and affect the financial statements, including their impact on estimates and assumptions,[380] the nature of the climate-related events and transition activities discussed in the proposed rules, which may manifest over a longer time horizon, necessitate targeted disclosure requirements to elicit decision-useful information for investors in a consistent manner. We also note that some registrants have already provided disclosure along the lines of the proposed requirements, which lends support to the feasibility of making such disclosures.[381]

By way of example, the proposed climate-related events and impacts relating to a transition away from greenhouse gas producing products and activities could affect a registrant's asset values and may result in asset impairments. The effect on asset values and the resulting impairments could, in turn, affect a registrant's assumptions when calculating depreciation expenses or asset retirement obligations associated with the retirement of tangible, long-lived assets. Providing related disclosure could help an investor understand if a registrant would be

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380 *See* FASB Staff Educational Paper, Intersection of Environmental, Social and Governance Matters with Financial Accounting Standards (Mar. 2021), available at *https://fasb.org/jsp/FASB/Document_C/DocumentPage&cid=1176176379917*. *See also* IFRS, Effects of climate-related matters on financial statements (Nov. 2020), available at *https://www.ifrs.org/content/dam/ifrs/supporting-implementation/documents/effects-of-climate-related-matters-on-financial-statements.pdf#:~:text=IFRS%20Standards%20do%20not%20refer%20explicitly%20to%20climate-related,significant%20judgements%20and%20estimates%20that%20management%20has%20made*. We also remind registrants of the requirements under FASB ASC Topic 250-10-50-4 for disclosures of changes in accounting estimates, including the requirement that if a change in estimate does not have a material effect in the period of change, but is reasonably certain to have a material effect in later periods, a description of that change in estimate must be disclosed whenever the financial statements of the period of change are presented.

381 *See* letter from Carbon Tracker (stating that some companies in the European Union and United Kingdom (several of which are registrants) are already providing this information and providing examples).

responsible for removing equipment or cleaning up hazardous materials sooner than originally planned due to a severe weather event. Similarly, a registrant's climate-related targets and related commitments, such as a commitment to achieve net-zero emissions by 2040, may impact certain accounting estimates and assumptions. For example, if a registrant announced a commitment that would require decommissioning an asset by a target year, then the registrant's depreciation expense should reflect alignment with that commitment. If the registrant believes it can execute a strategy that would allow it to meet the commitment and continue to operate the asset past the target date, then the proposed disclosure requirement could facilitate an investor's understanding and own assessment of the feasibility of that strategy. Other financial statement estimates and assumptions that may require disclosure pursuant to the proposed rules may include those related to the estimated salvage value of certain assets, estimated useful life of certain assets, projected financial information used in impairment calculations, estimated loss contingencies, estimated reserves (such as environmental reserve or loan loss allowances), estimated credit risks, fair value measurement of certain assets, and commodity price assumptions.

Several commenters stated that it was important to provide investors with an understanding of how climate-related events and activities are considered when a registrant develops the assumptions and estimates used to prepare its financial statements.[382] In particular, one commenter stated that investors may face "substantial risk" if disclosure on the impact of

[382] *See, e.g.,* letters from Carbon Tracker; Climate Accounting Project; ICCR; and Institute for Policy Integrity, Environmental Defense Fund, Initiative on Climate Risk & Resilience Law.

"decarbonization" on the estimates and assumptions underlying asset valuations is not disclosed.[383] Another commenter stated that "current corporate disclosure is not sufficient, is not readily available in existing financial disclosures, and does not allow investors to make comparable assessments of how companies are evaluating and responding to climate-related risks and opportunities."[384]

Request for Comment

81. Should we require disclosure of financial estimates and assumptions impacted by the climate-related events and transition activities (including disclosed targets), as proposed? How would investors use this information?

82. Should we instead require disclosure of only significant or material estimates and assumptions that were impacted by the climate-related events and transition activities? Alternatively, should we require disclosure of only estimates and assumptions that were materially impacted by the climate-related events and transition activities?

83. Should we instead require disclosure of financial estimates and assumptions impacts by a subset of climate-related events and transition activities, such as not requiring disclosure related to identified climate-related risks or only requiring disclosure with respect to a subset of severe weather events and natural conditions? If so, how should the subset be defined?

84. Should we instead utilize terminology and thresholds consistent with the critical accounting estimate disclosure requirement in 17 CFR 229.303(b)(3), such as "estimates made in accordance with generally accepted accounting principles that involve a significant level of estimation uncertainty and have had or are reasonably likely to have a material impact on the

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[383] *See* letter from Carbon Tracker.

[384] *See* letter from ICCR.

financial condition or results of operations of the registrant"? If so, should we only require disclosures of whether and how the climate-related events and transition activities impacted such critical accounting estimates? Should we require only a qualitative description of how the estimates and assumptions were impacted by the climate-related events and transition activities, as proposed? Should we require quantitative disclosures as well? If so, should we require such disclosure only if practicable or subject to another qualifier?

85. Should the disclosure of financial estimates and assumptions impacted by climate-related opportunities be optional, as proposed?

86. For the proposed financial statement metrics, should we require a registrant to disclose material changes in estimates, assumptions, or methodology among fiscal years and the reasons for those changes? If so, should we require the material changes disclosure to occur on a quarterly, or some other, basis? Should we require disclosure beyond a discussion of the material changes in assumptions or methodology and the reasons for those changes? Do existing required disclosures already elicit such information? What other approaches should we consider?

5. Inclusion of Climate-Related Metrics in the Financial Statements

The proposed financial statement metrics would be required in the financial statements, and therefore would be (i) included in the scope of any required audit of the financial statements in the relevant disclosure filing, (ii) subject to audit by an independent registered public accounting firm, and (iii) within the scope of the registrant's ICFR.

As discussed above, the proposed disclosures share many characteristics with other complex financial statement disclosures. The financial statement metrics present financial data that is derived from the registrant's consolidated balance sheets, income statements, and statements of cash flows, and would be presented in a similar way to existing financial statement disclosures.[385] Requiring certain climate-related information to be included in a note to the financial statements, and therefore subject to audit and within the scope of ICFR, should enhance the reliability of the proposed financial statement metrics.

Request for Comment

87. We are proposing to require the financial statement metrics to be disclosed in a note to the registrant's audited financial statements. Should we require or permit the proposed financial statement metrics to be disclosed in a schedule to the financial statements? If so, should the metrics be disclosed in a schedule to the financial statements, similar to the schedules required under Article 12 of Regulation S-X, which would subject the disclosure to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information, similar to the disclosure requirements under FASB ASC Topic 932-235-50-2 for registrants that have significant oil- and gas-producing activities? If so, should such supplemental schedule be subject to assurance or ICFR requirements?

88. Instead of requiring the financial statement metrics to be disclosed in a note to the registrant's audited financial statements, should we require a new financial statement for such metrics? For example, should a "consolidated climate statement" be created in addition to the consolidated balance sheets, statements of comprehensive income, cash flows, and other traditional financial statements? Would including the proposed metrics in a new financial statement provide more clarity to investors given that the metrics are intended to follow the

[385] *See supra* Section II.F.2 for additional discussion of shared characteristics that the financial statement metrics have with existing financial statement disclosures and commenters' views.

structure of the existing financial statements (including the line items)? What complications or unintended consequences may arise in practice if such a climate statement is created?

89. Should we require the disclosure to be provided outside of the financial statements? Should we require all of the disclosure to be provided in the proposed separately captioned item in the specified forms?

90. Should we require any additional metrics or disclosure to be included in the financial statements and subject to the auditing and ICFR requirements as described above? For example, should any of the disclosures we are proposing to require outside of the financial statements (such as GHG emissions metrics) be included in the financial statements? If so, should such metrics be disclosed in a note or a schedule to the financial statements? If in a schedule, should such schedule be similar to the schedules required under Article 12 of Regulation S-X and subject to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information in a supplemental schedule? If so, should such supplemental schedule be subject to assurance or ICFR requirements?

91. Under the proposed rules, PCAOB auditing standards would be applicable to the financial statement metrics that are included in the audited financial statements, consistent with the rest of the audited financial statements. What, if any, additional guidance or revisions to such standards would be needed in order to apply PCAOB auditing standards to the proposed financial statement metrics? For example, would guidance on how to apply existing requirements, such as materiality, risk assessment, or reporting, be needed? Would revisions to the auditing standards be necessary? What additional guidance or revisions would be helpful to auditors, preparers, audit committee members, investors, and other relevant participants in the audit and financial reporting process?

92. Would it be clear that the climate-related financial statement metrics would be included in the scope of the audit when the registrant files financial statements prepared in accordance with IFRS as issued by the IASB? Would it be clear that the proposed rules would not alter the basis of presentation of the financial statements as referred to in an auditor's report? Should we amend Form 20-F, other forms, or our rules to clarify the scope of the audit or the basis of presentation in this context? For example, should we amend Form 20-F to state specifically that the scope of the audit must include any notes prepared pursuant to Article 14 of Regulation S-X? What are the costs for accounting firms to provide assurance with respect to the financial statement metrics? Would those costs decrease over time?

G. GHG Emissions Metrics Disclosure

1. GHG Emissions Disclosure Requirement

a. Overview

In addition to the other proposed climate-related disclosures, the proposed rules would require a registrant to disclose its GHG emissions for its most recently completed fiscal year.[386] As institutional investors and other commenters have indicated, GHG emissions information is important to investment decisions for various reasons, including because GHG emissions data is quantifiable and comparable across industries and can be particularly useful in conducting a transition risk analysis;[387] it can be used to evaluate the progress in meeting net-zero

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[386] *See proposed* 17 CFR 229.1504(a). As discussed below, the proposed rules would also require a registrant to disclose its GHG emissions for the historical fiscal years included in its consolidated financial statements.

[387] *See, e.g., infra* note 432 and accompanying text.

commitments and assessing any associated risks;[388] and it may be relevant to investment or voting decisions because GHG emissions could impact the company's access to financing, as well as its ability to reduce its carbon footprint in the face of regulatory, policy, and market constraints.[389] Thus, while the justifications for the proposed GHG emissions disclosures overlap in some respects with the justifications for the other proposed climate-related disclosure rules, the GHG emissions requirements are intended to address separate challenges and are supported by the particular justifications discussed in detail in the following sections.

The proposed rules would establish certain requirements regarding the measurement and reporting of GHG emissions that would promote the comparability of such disclosure. We have based the proposed GHG emissions disclosure rules on the concept of scopes, which are themselves based on the concepts of direct and indirect emissions, developed by the GHG Protocol. We also have proposed definitions of Scope 1, Scope 2, and Scope 3 emissions that are substantially similar to the corresponding definitions provided by the GHG Protocol. Commenters indicated that the GHG Protocol has become the leading accounting and reporting standard for GHG emissions.[390] By sharing certain basic concepts and a common vocabulary with the GHG Protocol, the proposed rules should help limit the compliance burden for those registrants that are already disclosing their GHG emissions pursuant to the GHG Protocol.[391]

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[388] *See, e.g., infra*, note 433 and accompanying text.

[389] *See, e.g., infra* note 455 and accompanying text.

[390] *See supra* note 112 and accompanying text.

[391] In addition, as discussed in Section II.G.2.d, the proposed rules would permit a registrant, if actual reported data is not reasonably available, to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter, together with actual, determined GHG emissions data for the first three fiscal quarters, as long as the registrant

Similarly, to the extent that registrants elect to follow GHG Protocol standards and methodologies, investors already familiar with the GHG Protocol may also benefit.

The proposed rules would define "greenhouse gases" as carbon dioxide ("CO_2"); methane ("CH_4"); nitrous oxide ("N_2O"); nitrogen trifluoride ("NF_3"); hydrofluorocarbons ("HFCs"); perfluorocarbons ("PFCs"); and sulfur hexafluoride ("SF_6").[392] The greenhouse gases included in the proposed definition reflect the gases that are currently commonly referenced by international, scientific, and regulatory authorities as having significant climate impacts. In addition to being consistent with the GHG Protocol,[393] the list of constituent greenhouse gases would be consistent with the gases identified by widely used frameworks, such as the Kyoto Protocol, the UN Framework Convention on Climate Change, the U.S. Energy Information Administration, and the EPA.[394]

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promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter. *See* proposed 17 CFR 229.1504(e)(4)(i). This proposed provision should also help mitigate the GHG emissions compliance burden for registrants.

392 *See* proposed 17 CFR 229.1500(g).

393 In Feb. 2013 the GHG Protocol amended the required greenhouse gas inventory list to align with the seven gases required by the Kyoto Protocol (consistent with the proposed definition of greenhouse gases). *See* GHG Protocol, *Required Greenhouse Gases in Inventories: Accounting and Reporting Standard Amendment* (Feb. 2013), *available at* https://www.ghgprotocol.org/sites/default/files/ghgp/NF3-Amendment_052213.pdf. Nevertheless, the GHG Protocol's Corporate Accounting and Reporting Standard, which was updated in 2015, continues to refer to only six greenhouse gases. We believe the common understanding of the GHG Protocol's Corporate Accounting and Reporting Standard is that the earlier amendment (reflecting seven gases) applies despite the subsequent 2015 update to the standard.

394 *See* UN Framework Convention on Climate Change ("UNFCCC") – *Reporting requirements* (last visited Nov. 4, 2021), *available at* https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/reporting-requirements. The Kyoto Protocol is the international agreement linked to the UNFCCC. *See also* U.S. Energy Information Administration – *Where greenhouse gases come from* (last updated May 21, 2021), *available at* https://www.eia.gov/energyexplained/energy-and-the-environment/where-greenhouse-gases-come-from.php; and EPA – *Overview of Greenhouse Gases* (last visited Nov. 4, 2021), *available at* https://www.epa.gov/ghgemissions/overview-greenhouse-gases.

The proposed rules would define GHG emissions to mean direct and indirect emissions of greenhouse gases.[395] Pursuant to the proposed definition of GHG emissions, direct emissions are GHG emissions from sources that are owned or controlled by a registrant,[396] whereas indirect emissions are GHG emissions that result from the activities of the registrant, but occur at sources not owned or controlled by the registrant.[397] Similar to the GHG Protocol, the proposed rules would define:[398]

- Scope 1 emissions as direct GHG emissions from operations that are owned or controlled by a registrant;[399]
- Scope 2 emissions as indirect GHG emissions from the generation of purchased or acquired electricity, steam, heat, or cooling that is consumed by operations owned or controlled by a registrant;[400] and
- Scope 3 emissions as all indirect GHG emissions not otherwise included in a registrant's Scope 2 emissions, which occur in the upstream and downstream activities of a registrant's value chain.[401] Upstream emissions include emissions attributable to goods

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395 *See* proposed 17 CFR 229.1500(h).

396 *See* proposed 17 CFR 229.1500(h)(1).

397 *See* proposed 17 CFR 229.1500(h)(2).

398 Sources of emissions can include transportation, electricity production, industrial processes, commercial and residential use, agriculture, and land use changes (including deforestation). *See, e.g.,* EPA, *Sources of Greenhouse Gas Emissions*, available at https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.).

399 *See* proposed 17 CFR 229.1500(p).

400 *See* proposed 17 CFR 229.1500(q).

401 *See* proposed 17 CFR 229.1500(r).

and services that the registrant acquires, the transportation of goods (for example, to the registrant), and employee business travel and commuting. Downstream emissions include the use of the registrant's products, transportation of products (for example, to the registrant's customers), end of life treatment of sold products, and investments made by the registrant.

As previously noted, the EPA uses the concept of scopes, and refers to the GHG Protocol, when providing guidance to companies regarding their GHG emissions inventories.[402] Because GHG emissions data compiled for the EPA's own GHG emissions reporting program would be consistent with the GHG Protocol's standards, and thus with the proposed rules, a registrant may use that data in partial fulfillment of its GHG emissions disclosure obligations pursuant to the proposed rules.

The proposed rules would require a registrant to disclose its total Scope 1 emissions separately from its total Scope 2 emissions after calculating them from all sources that are included in the registrant's organizational and operational boundaries.[403] A registrant would also be required to disclose separately its total Scope 3 emissions for the fiscal year if those emissions are material, or if it has set a GHG emissions reduction target or goal that includes its Scope 3 emissions.[404] For each of its Scopes 1, 2, and 3 emissions, the proposed rules would require a

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[402] *See supra* note 113. The EPA requires the disclosure of direct GHG emissions primarily from large industrial sources as well as emissions from fuel and industrial gas suppliers and CO_2 injection sites in the United States. *See* EPA, *Greenhouse Gas Reporting Program*, available at https://www.epa.gov/ghgreporting.

[403] *See* proposed 17 CFR 229.1504(b)(1). We discuss the setting of a registrant's organizational and operational boundaries in Section II.G.2. below.

[404] *See* proposed 17 CFR 229.1504(c)(1). As discussed in greater detail below, for many companies, these emissions may be material for assessing the companies' exposure to climate-related risks, particularly transition

registrant to disclose the emissions both disaggregated by each constituent greenhouse gas (*e.g.*, by carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), nitrogen trifluoride (NF_3), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6)) and in the aggregate.[405] By requiring the disclosure of GHG emissions both disaggregated by the constituent greenhouse gases and in the aggregate, investors could gain decision-useful information regarding the relative risks to the registrant posed by each constituent greenhouse gas in addition to the risks posed by its total GHG emissions by scope. For example, if a government targets reduction of a specific greenhouse gas, knowing that a registrant has significant emissions of such gas would provide insight into potential impacts on the registrant's business.[406] Because measuring the constituent greenhouse gases is a necessary step in calculating a registrant's total GHG emissions per scope, the proposed disaggregation by each constituent greenhouse gas should not create significant additional burdens.

Consistent with the GHG Protocol, the proposed rules would require a registrant to express each scope of its GHG emissions in terms of carbon dioxide equivalent ("CO_2e").[407] CO_2e is the common unit of measurement used by the GHG Protocol to indicate the global

risks, and their strategy to reduce their carbon footprint in the face of regulatory, policy, and market constraints. *See infra* Section II.G.1.b.

[405] *See* proposed 17 CFR 229.1504(a)(1).

[406] For example, the White House has recently launched an initiative to reduce methane emissions in the United States. *See* the White House Office of Domestic Climate Policy, *U.S. Methane Emissions Reductions Action Plan* (Nov. 2021), available at https://www.whitehouse.gov/wp-content/uploads/2021/11/US-Methane-Emissions-Reduction-Action-Plan-1.pdf.

[407] *See id*.

warming potential ("GWP")[408] of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide (CO_2).[409] Requiring a standard unit of measurement for GHG emissions, rather than different units of measurement for the different greenhouse gases, should simplify the disclosure for investors and enhance its comparability across registrants with different types of GHG emissions.

For all scopes of GHG emissions, the proposed rules would require a registrant to disclose GHG emissions data in gross terms, excluding any use of purchased or generated offsets.[410] Because the value of offsets can vary depending on restrictions that are or may be imposed by regulation or market conditions, disclosing GHG emissions data in this manner would allow investors to assess the full magnitude of climate-related risk posed by a registrant's GHG emissions and the registrant's plans for managing such risk. This proposed approach also is consistent with the approach taken by the GHG Protocol.[411]

Commenters generally supported requiring disclosure of a registrant's Scope 1 and Scope 2 emissions, with many also supporting disclosure of Scope 3 emissions.[412] A common reason

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408 The proposed rules would define global warming potential to mean a factor describing the global warming impacts of different greenhouse gases. It is a measure of how much energy will be absorbed in the atmosphere over a specified period of time as a result of the emission of one ton of a greenhouse gas, relative to the emissions of one ton of carbon dioxide (CO_2). *See* proposed 17 CFR 229.1500(f).

409 *See* proposed 17 CFR 229.1500(d).

410 *See* proposed 17 CFR 229.1504(a)(2). The proposed rules would define carbon offsets to represent an emissions reduction or removal of greenhouse gases in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions. *See* proposed 17 CFR 229.1500(a).

411 *See* GHG Protocol, *Corporate Accounting and Reporting* Standard, Chapter 9.

412 *See, e.g.*, letters from Actual Systems, Inc.; Adobe Inc.; AICPA; Curt Albright (June 13, 2021); AllianceBernstein; Alphabet *et al*.; Amalgamated Bank; Americans for Financial Reform Education Fund; Andrew Behar; Apple; Ted Atwood; Baillie Gifford; Bank of America Corporation; BlackRock; Bloomberg, LP; Blueprint Financial; BNP Paribas; Rob Bonta, California Attorney General *et al*.; Boston Common Asset

asserted by commenters for requiring GHG emissions disclosure is that quantitative data, such as GHG emissions data, is useful for assessing a registrant's exposure to climate-related risks and accordingly its ability to transition to a lower carbon economy.[413] Investors that are currently using GHG emissions data do so because the data provides insight into a registrant's exposure to climate-related risks, and transition risks in particular—risks that have implications for a

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Management; BSR; CalPERS; CALSTRS; Calvert Research and Management; Carbon4 Finance (June 14, 2021); Carbon180 (June 13, 2021); Carbon Tracker Initiative; Cardano Risk Management Ltd.; Carolyn Kohoot; CDP NA; Center for American Progress; Center for Climate and Energy Solutions; Center for Law and Social Policy and a New Deal for Youth (June 15, 2021); Ceres *et al*.; Certified B Corporations; Chevron; Christopher Lish; Clean Yield Asset Management; Climate Advisers; Climate Governance Initiative Climate Risk Disclosure Law and Policy Lab; Climate Policy Ocean Conservancy (June 14, 2021); Coalition on Material Emissions Transparency (COMET) (June 10, 2021); Confluence Philanthropy; Consumer Federation of America; Crake Asset Management (June 4, 2021); Credit Suisse (June 11, 2021); Daniel Cain; Katherine DiMatteo; Domini Impact Investments LLC; Douglas Hileman Consulting, LLC; Dow (June 4, 2021); Dynamhex Inc.; Energy Infrastructure Council (June 14, 2014); Environmental Bankers Association; E2; E3G; ERM CVS; Etsy, Inc.; FAIRR Initiative; First Affirmative Financial Network; Regenerative Crisis Response Committee; the Forum for Sustainable and Responsible Investment; Friends of the Earth, Amazon Watch, and RainForect Action Network; Generation Investment Management LLP (June 14, 2021); Georgetown Climate Center (June 14, 2021); George S. Georgiev; Emmanuelle Haack; Hannon Armstrong; Hermes Equity Ownership Services Limited; HP, Inc.; IHS Markit; Impact Investors, Inc.; Impax Asset Management; Institute for Governance and Sustainable Development; Institute for Market Transformation; Interfaith Center on Corporate Responsibility; International Corporate Governance Network; Invesco; Investment Consultants Sustainability Working Group-U.S.; Investor Advocates for Social Justice (June 14, 2021); Janice Shade (June 22, 2021); Japanese Bankers Association; Keramida *et al.*; Majedie Asset Management; Manifest Climate; Mercy Investment Services, Inc.; Microsoft Corporation; Miller/Howard Investments; Mirova US LLC; Morningstar, Inc.; MSCI Inc.; Natural Resources Defense Council; NEI Investments; Newground Social Investment (June 14, 2021); New York City Comptroller; New York State Society of Certified Public Accountants; Nia Impact Capital (June 14, 2021); Norges Bank Investment; NY State Comptroller; Oxfam America (June 13, 2021); Paradice Investment Management; PayPal Holdings, Inc.; Pension Investment Association of Canada (June 14, 2021); Michael S. Pieciak, Vermont Commissioner of Financial Regulation (June 14, 2021); PRI (Consultation Response); Private Equity Stakeholder Project (June 14, 2021); Public Citizen and 57 other signatories (June 14, 2021); Publish What you Pay (US) (June 13, 2021); Revolving Door Project; RMI; Salesforce.com, Inc.; SASB; Schroder Investment Management North America (June 14, 2021); Seventh Generation Interfaith, Inc.; State Street Global Advisors; Maria Stoica; Stray Dog Capital; Sunrise Bay Area; Sustainable Inclusive Solutions (June 13, 2021); Terra Alpha Investor Group; the organization Green America and 14,600 Individual Americans (June 14, 2021); TotalEnergies; Trillium Asset Management; Union of Concerned Scientists (June 14, 2021); Unovis Asset Management (June 11, 2021); Value Balancing Alliance; Vert Asset Management LLC; Wellington Management Co.; Wespath Benefits and Investments; William and Flora Hewlett Foundation; W.K. Associates, Inc. (June 14, 2021); World Benchmarking Alliance; and WBCSD.

[413] *See, e.g.*, letters from Calvert Research and Management; Ceres *et al*.; NY State Comptroller; and SASB.

registrant's financial condition and results of operations.[414] An increasing number of investors have identified GHG emissions as material to their investment decision-making and are either purchasing this information from third-party providers or engaging with companies to obtain the information directly. In each situation, there is a lack of consistency, comparability, and reliability in those data that our proposal seeks to address.[415]

Some of these commenters supported requiring disclosure of Scope 1 emissions at the individual greenhouse gas level.[416] Although commenters noted an increase in the voluntary reporting of climate-related disclosure, several also stated that significant gaps remain in the disclosure, particularly regarding Scope 3 emissions, which, for certain industries, can comprise a majority of GHG emissions.[417]

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[414] *See, e.g.*, letters from Bloomberg, LP (stating that GHG emissions are critical components of any climate-related financial disclosure scheme, and that understanding the emissions contributions of a company is an important factor for understanding how financially vulnerable they may be to shifts in regulation, technology, and markets during any transition to a lower-carbon economy); CalPers (indicating the use of GHG emissions data by asset managers to evaluate potential transition risks); and Credit Suisse (supporting mandatory disclosure of Scopes 1, 2, and 3 emissions for key industries as such information is critical for financial market participants to have a better understanding of their total climate-related exposure to the highest emitting sectors).

[415] *See, e.g.*, letters from CALSTRS (indicating the use by asset managers of third-party derived climate data, the expense and lack of consistency regarding such data, and the need for publicly available climate data so that the commenter may more efficiently and cost-effectively allocate capital to lower climate risk assets in line with its investment objectives); Credit Suisse (stating that the lack of consistent and reliable climate-related data has created significant challenges in the ability of financial market participants to adequately assess and compare the performance of reporting companies, as well as efficiently allocate capital towards low-carbon solutions); and Norges Bank Investment Management (indicating their reliance on companies' climate-related data to assess their exposure to the effects of climate and how they manage climate-related risks and opportunities, and stating that the scope and quality of companies' climate-related disclosures varies significantly and that their climate-related data is often incomplete and/or not comparable).

[416] *See, e.g.,* letters from Amazon Watch and Rainforest Action Network; Dimensional; Friends of the Earth; and ICCR.

[417] *See, e.g.,* letters from Ceres ("In land-intensive sectors, deforestation, forest degradation, and land-use change are important financial risks associated with climate change. In these sectors—for example food and forest management—currently Scope 3 GHG emissions are not regularly disclosed, despite comprising upwards of

Many commenters recommended basing any GHG emissions disclosure requirement on the GHG Protocol.[418] Several of these commenters stated that the GHG Protocol's framework for reporting GHG emissions, delineated as Scopes 1, 2, and 3 emissions, has become the globally-accepted standard used by numerous companies for reporting their GHG emissions.[419] Commenters also indicated that a mandatory standard for reporting GHG emissions based on the GHG Protocol would help in producing consistent, comparable, and reliable climate-related information for investors.[420] Some commenters also stated that mandating GHG emissions pursuant to a standardized approach, such as the GHG Protocol, would help mitigate instances of greenwashing.[421]

Some commenters indicated that the Commission should mandate disclosure of only Scopes 1 and 2 emissions.[422] Other commenters suggested limiting the mandatory disclosure of

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90% of emissions from companies."); *see also* letters from Apple (stating that Scope 3 emissions "represent the overwhelming majority of most companies' carbon footprint and are therefore critical to include"); Natural Resources Defense Council; NY State Comptroller; and Teachers Insurance and Annuity Association of America.

418 *See, e.g.*, letters from Apple; bp; Carbon Tracker Initiative; Consumer Federation of America; ERM CVS; Ethic Inc.; First Affirmative Financial Network; Regenerative Crisis Response Committee; MSCI, Inc.; Natural Resources Defense Council; New York State Society of Certified Public Accountants; Paradice Investment Management; Stray Dog Capital; and Huw Thomas.

419 *See, e.g.*, letters from ERM CVS; and Natural Resources Defense Council.

420 *See, e.g.,* letters from BNP Paribas; Natural Resources Defense Council; and New York State Society of Certified Public Accountants.

421 *See, e.g.*, letters from BNP Paribas; Center for Law and Social Policy (June 15, 2021); and Dimensional Fund Advisors. *See also* Section IV.C below for further discussion of the practice of greenwashing.

422 *See, e.g.*, letters from Acadian Asset Management LLC; American Bankers Association; American Exploration Production Council (June 11, 2021); Seema Arora; Bank Policy Institute; Biotechnology Innovation Organization; Business Roundtable (June 11, 2021); Cisco (June 11, 2021); Conning (June 11, 2021); CPP Investments; Decatur Capital Management; Dimensional Fund Advisors; Ethic Inc.; Freeport-McMoran (June 11, 2021); Harvard Management Company; Information Technology Industry Council; Institute of International Bankers; Investment Adviser Association; Manulife Investment Management; PGIM; PIMCO; Real Estate

Scope 3 emissions to registrants in certain industries,[423] larger registrants, or when a registrant's Scope 3 emissions comprise 40 percent of its total emissions.[424] These commenters pointed to difficulties in obtaining the necessary data from third parties and methodological uncertainties as reasons for limiting or not requiring disclosure of Scope 3 emissions. Other commenters and research support a requirement for disclosure of Scope 3 emissions that is independent of an individual company's materiality assessment.[425]

A few commenters stated that the Commission should require the disclosure of only Scope 1 emissions.[426] One commenter stated that this approach would be consistent with the Greenhouse Gas Reporting Program overseen by the EPA, which they stated requires the tracking of facility-level Scope 1 emissions from "large greenhouse gas emitters."[427] Another commenter opposed a requirement to disclose any GHG emissions, asserting that GHG emissions do not serve as adequate indicators for the actual risks faced by a registrant.[428]

Roundtable (June 9, 2021); Matthew Roling and Samantha Tirakian; SIFMA Asset Management Group; the Vanguard Group, Inc.; and Walmart, Inc.

423 *See, e.g.*, letters from Teachers Insurance and Annuity Association of America (recommending requiring Scope 3 disclosure from issuers in the financial, energy, transportation, materials and buildings, and agriculture, food, and forest products sectors; and Sens. Schatz and Whitehouse (recommending requiring Scope 3 disclosure for financed emissions).

424 *See* letter from Catavento Consultancy.

425 *See, e.g.*, letters from Uber Technologies (Apr. 27, 2021); and Americans for Financial Reform Education Fund. *See also* TCFD, *Guidance on Metrics, Targets, and Transition Plans* (stating that 47% of respondents surveyed supported disclosure of Scope 3 GHG emissions independent of a materiality assessment).

426 *See* letters from American Petroleum Institute; Virginia Harper Ho; and David Marriage.

427 *See* letter from American Petroleum Institute.

428 *See* letter from Richard Love.

We agree with the many commenters that indicated that GHG emissions disclosure could provide important information for investors to help them evaluate the climate-related risks faced by registrants and to understand better how registrants are planning to mitigate or adapt to those risks.[429] The proposed GHG emissions disclosures could be important to an investor's understanding of other disclosures that would be required by the proposed rules, such as disclosure of the likely impacts of climate-related risks as well as any targets and goals disclosure.[430]

We propose requiring disclosure of registrants' Scopes 1 and 2 emissions because, as several institutional investor commenters stated, investors need and many investors currently use this information to make investment or voting decisions.[431] One of those commenters stated that GHG emissions information serves as the starting point for transition risk analysis because it is quantifiable and comparable across companies and industries.[432] The commenter, an institutional investor, indicated that it uses GHG emissions data to rank companies within industries based on their GHG emissions intensity to better assess transition risk exposure of companies in its portfolio and make informed investment decisions. This commenter also indicated that Scopes 1 and 2 emissions information is more broadly available than Scope 3 emissions data because of the challenges of collecting the latter data.

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429 *See supra* notes 412 and 413.

430 *See supra* Section II.C and *infra* Section II.I.

431 *See, e.g.*, letters from PIMCO; State Street Global Advisors; Trillium Asset Management; and Wellington Management Co.

432 *See* Wellington Management Co.

As previously mentioned, several large institutional investors and financial institutions, which collectively have trillions of dollars in assets under management, have formed initiatives and made commitments to achieve a net-zero economy by 2050, with interim targets set for 2030.[433] These initiatives further support the notion that investors currently need and use GHG emissions data to make informed investment decisions. These investors and financial institutions are working to reduce the GHG emissions of companies in their portfolios or of their counterparties and need GHG emissions data to evaluate the progress made regarding their net-zero commitments and to assess any associated potential asset devaluation or loan default risks.[434] A company's GHG emissions footprint also may be relevant to investment or voting decisions because it could impact the company's access to financing or signal potential changes in its financial planning as governments, financial institutions, and other investors make demands to reduce GHG emissions.

We also agree with commenters that basing the Commission's proposed GHG emissions disclosure rules on concepts used in the GHG Protocol could help provide investors with consistent, comparable, and reliable information about a registrant's GHG emissions.[435] In this regard, we note that several studies have found that GHG emissions data prepared pursuant to the GHG Protocol have become the most commonly referenced measurements of a company's exposure to climate-related risks.[436]

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433 *See supra* Section I.C.1 (discussing, in particular, Climate Action 100+ and GFANZ).

434 *See, e.g.*, Climate Action 100+, *The Three Asks*.

435 *See supra* note 420.

436 *See, e.g.,* Kauffmann, C., C. Tébar Less and D. Teichmann (2012), *Corporate Greenhouse Gas Emission Reporting: A Stocktaking of Government Schemes*, OECD Working Papers on International Investment, 2012/01, OECD Publishing, at 8, *available at* http://dx.doi.org/10.1787/5k97g3x674lq-en ("For example, the use of scope 1, 2, 3 to classify emissions as defined by the GHG Protocol has become common language and practice today.").

However, we are not proposing to adopt all of the features of the GHG Protocol into the Commission's proposed climate-related disclosure rules. As explained in greater detail below, in one significant respect the proposed rules differ from the approach taken by the GHG Protocol regarding the methodology that a registrant would be required to use when calculating its GHG emissions. This difference better suits the U.S. financial reporting regime and the needs of investors.[437] We recognize that the methodologies pertaining to the measurement of GHG emissions, particularly Scope 3 emissions, are evolving. While we expect that many registrants would choose to follow the standards and guidance provided by the GHG Protocol when calculating their GHG emissions, the proposed rules would not require registrants to do so. Allowing for some flexibility in the choice of GHG emissions methodologies would permit registrants to adapt to new approaches, such as those pertaining to their specific industry, as they emerge.

b. The Treatment of Scopes 1 and 2 Emissions Compared to Scope 3 Emissions

We are proposing to require all registrants to disclose their Scopes 1 and 2 emissions. Those types of emissions result directly or indirectly from facilities owned or activities controlled by a registrant. The relevant data for calculating Scopes 1 and 2 emissions should be reasonably available to registrants, and the relevant methodologies are fairly well-developed. Registrants with large stationary sources of emissions already report Scope 1 emissions data to

[437] *See infra* Section II.G.2 (discussing the proposed treatment for determining ownership or control for the purpose of setting a registrant's organizational boundaries when measuring its Scopes 1 and 2 emissions).

the EPA, and the EPA provides detailed methodologies for a range of industries with significant Scope 1 emissions.[438] The EPA also provides detailed guidance for the calculation of Scope 2 emissions, which, although classified as "indirect emissions," are generated by direct activities of the registrant in using purchased energy.[439]

Unlike Scopes 1 and 2 emissions, Scope 3 emissions typically result from the activities of third parties in a registrant's value chain[440] and thus collecting the appropriate data and calculating these emissions would potentially be more difficult than for Scopes 1 and 2 emissions. At the same time, in many cases Scope 3 emissions disclosure may be necessary to present investors a complete picture of the climate-related risks—particularly transition risks—that a registrant faces and how GHG emissions from sources in its value chain, which are not included in its Scopes 1 and 2 emissions, may materially impact a registrant's business operations and associated financial performance. Scope 3 emissions can augment the information provided in Scopes 1 and 2 emissions and help to reflect the total emissions associated with a registrant's operations, including inputs from upstream activities, such as those

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438 *See* EPA, *Direct Emissions from Stationary Combustion Sources* (Dec. 2020), available at https://www.epa.gov/sites/default/files/2020-12/documents/stationaryemissions.pdf.

439 *See* EPA, *Indirect Emissions from Purchased Electricity* (Dec. 2020), available at https://www.epa.gov/sites/default/files/2020-12/documents/electricityemissions.pdf.

440 As previously mentioned, the proposed rules would define a registrant's value chain to mean the upstream and downstream activities related to a registrant's operations. Upstream activities include activities that relate to the initial stages of producing a good or service (*e.g.*, materials sourcing, materials processing, and supplier activities). Downstream activities include activities that relate to processing materials into a finished product and delivering it or providing a service to the end user (*e.g.*, transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments). *See* proposed 17 CFR 229.1500(t).

of its suppliers, and outputs from downstream activities, such as those involving the distribution, use, and disposal of a registrant's products or services.[441]

Scope 3 emissions are indirect, but registrants can and do take steps to limit Scope 3 emissions and the attendant risks. Although a registrant may not own or control the operational activities in its value chain that produce Scope 3 emissions, it nevertheless may influence those activities, for example, by working with its suppliers and downstream distributors to take steps to reduce those entities' Scopes 1 and 2 emissions (and thus help reduce the registrant's Scope 3 emissions) and any attendant risks. As such, a registrant may be able to mitigate the challenges of collecting the data required for Scope 3 disclosure.[442] Such data may reveal changes in a registrant's Scope 3 emissions over time that could be informative for investors in discerning how the registrant is managing transition risks. For example, a registrant could seek to reduce the potential impacts on its business of its upstream emissions by choosing to purchase from more GHG emission-efficient suppliers or by working with existing suppliers to reduce emissions. A registrant could also seek to reduce the potential impacts on its business of downstream emissions by producing products that are more energy efficient or involve less GHG emissions when consumers use them, or by contracting with distributors that use shorter transportation routes. Being able to compare Scope 3 emissions over time could thus be a

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[441] *See, e.g.*, letter from Wellington Management Co.

[442] *See, e.g.*, letter from Apple (referencing its *2021 Environmental Progress Report*, available at https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2021.pdf, which states that 109 suppliers across 24 countries have committed to manufacturing Apple products with 100 percent renewable energy, and indicating Apple's development of detailed life cycle assessment models, which help the company identify its top product component contributors of carbon emissions and facilitate its providing a comprehensive account of its relevant Scope 3 emissions).

valuable tool for investors in tracking a registrant's progress in mitigating transition and other climate-related risks.

To balance the importance of Scope 3 emissions with the potential relative difficulty in data collection and measurement, the proposed rules would require disclosure of Scope 3 emissions only if those emissions are material, or if the registrant has set a GHG emissions reduction target or goal that includes its Scope 3 emissions.[443] As explained in greater detail below, this latter proposed disclosure requirement could assist investors in tracking the progress of the registrant toward reaching the target or goal so that investors can better understand potential associated costs.[444]

Consistent with the Commission's definition of "material" and Supreme Court precedent, a registrant would be required to disclose its Scope 3 emissions if there is a substantial likelihood that a reasonable investor would consider them important when making an investment or voting decision.[445] In articulating this materiality standard, the Supreme Court recognized that "[d]oubts as to the critical nature" of the relevant information "will be commonplace." But "particularly in view of the prophylactic purpose" of the securities laws," and "the fact that the content" of the disclosure "is within management's control, it is appropriate that these doubts be resolved in favor of those the statute is designed to protect," namely investors.[446]

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[443] *See* proposed 17 CFR 229.1504(c)(1). As explained below, we are also proposing a safe harbor for Scope 3 disclosures. *See infra* Section II.G.3.

[444] *See infra* note 461 and accompanying text.

[445] *See supra* note 209.

[446] *TSC Industries, Inc. v Northway*, 426 U.S. at 448.

When recommending that the Commission require the disclosure of Scope 3 emissions, some commenters indicated that Scope 3 emissions represent the relatively large source of overall GHG emissions for many companies.[447] Given their relative magnitude, we agree that, for many registrants, Scope 3 emissions may be material to help investors assess the registrants' exposure to climate-related risks, particularly transition risks,[448] and whether they have developed a strategy to reduce their carbon footprint in the face of regulatory, policy, and market constraints.[449]

Scope 3 emissions information may be material in a number of situations to help investors gain a more complete picture of the transition risks to which a registrant may be exposed. In certain industries, a transition to lower-emission products or processes may already be underway, triggered by existing laws or regulations, changes in weather, policy initiatives, a shift in consumer preferences, technological changes, or other market forces, such that financial risks are reasonably foreseeable for registrants in those industries based on the emissions in their

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[447] *See, e.g.*, letters from Apple; and WK Associates.

[448] *See, e.g.*, letter from Wellington Management Co.

[449] *See* Eric Rosenbaum, *Climate experts are worried about the toughest carbon emissions for companies to capture* (Aug. 18, 2021) ("Scope 3 carbon emissions, or those not part of operations or under direct control, represent the majority of the carbon footprint for most companies, in some cases as high as 85% to 95%"), *available at* https://www.cnbc.com/2021/08/18/apple-amazon-exxon-and-the-toughest-carbon-emissions-to-capture.html#:~:text=Scope%203%20carbon%20emissions%2C%20or,as%2085%25%20to%2095%25. *See also* MSCI, *Emissions: Seeing the Full Picture* (Sept. 17, 2020) ("For some companies and industries, Scope 3 emissions dominate the overall carbon footprint. For example, the Scope 3 emissions of the integrated oil and gas industry . . . are more than six times the level of its Scope 1 and 2 emissions."), *available at* https://www.msci.com/www/blog-posts/scope-3-carbon-emissions-seeing/02092372761; letter from WK Associates, Inc. (June 14, 2021) (stating that Scope 3 emissions account for approximately 70-90% of lifecycle emissions from oil products and 60-85% of those from natural gas, according to the International Energy Agency).

value chain. For example, some registrants may need to allocate capital to invest in lower emissions equipment. Investors thus need and use information about the full GHG emissions footprint and intensity of a registrant to determine and compare how exposed a registrant is to the financial risks associated with any transition to lower-emission products.

For example, in the automobile industry, the vast majority of car manufacturers' GHG emissions footprint comes from tailpipe emissions of cars driven by customers, as compared to the emissions from manufacturing the cars.[450] There is already a transition underway to reduce tailpipe emissions through the adoption of stricter fuel efficiency regulations[451] and by governmental initiatives that encourage the manufacture and demand for electric vehicles.[452] Demand for electric vehicles is increasing in the United States and globally,[453] and leading automobile manufacturers have announced plans to increase the manufacture of electric vehicles, with many setting commitments to manufacture all-electric fleets or achieve net-zero

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450 *See, e.g.,* TCFD, *Guidance on Metrics, Targets, and Transition Plans* (Oct. 2021), Appendix 1, Figure A1-1 (*Importance of Scope 3 GHG Emissions in Certain Sectors*) (showing that, for the automobiles and components sector, the majority of GHG emissions result from downstream product use), available at https://assets.bbhub.io/company/sites/60/2021/07/2021-Metrics_Targets_Guidance-1.pdf.

451 *See, e.g.*, Coral Davenport, *E.P.A. Announces Tightest-Ever Auto Pollution Rules*, N.Y. Times, Dec. 20, 2021, available at https://www.nytimes.com/2021/12/20/climate/tailpipe-rules-climate-biden.html?searchResultPosition=25 (reporting that the EPA announced strengthened limits on pollution from automobile tailpipes). In addition, more than a dozen states have adopted low emission vehicle standards. *See* California Air Resources Board, *States that have Adopted California's Vehicle Standards under Section 177 of the Federal Clean Air Act*, available at https://ww2.arb.ca.gov/resources/documents/states-have-adopted-californias-vehicle-standards-under-section-177-federal.

452 *See, e.g.*, Catherine Lucey and Andrew Duehren, *Biden Touts Build Back Better in Meeting With CEOs*, Wall Street Journal, Jan. 26, 2022, available at https://www.wsj.com/articles/biden-touts-build-back-better-in-meeting-with-ceos-11643227677?mod=Searchresults_pos1&page= (reporting efforts to obtain Federal tax incentives to promote the use of electric and hydrogen-power vehicles).

453 *See* Jack Ewing, *Sales of Electric Vehicles Surpass Diesel in Europe, a First*, N.Y. Times, Jan. 17, 2022 (stating that sales of battery-powered cars soared in Europe, the United States, and China in 2021), available at https://www.nytimes.com/2022/01/17/business/electric-vehicles-europe.html?searchResultPosition=1.

emissions.[454] This transition raises financial risks for automobile manufacturers, which can be gauged, in part, by their Scope 3 emissions. Investors can use Scope 3 emissions data concerning a car manufacturer's suppliers and the use of its sold products to assess whether a particular manufacturer is taking steps to mitigate or adapt to the risks posed by a transition to lower emission vehicles.

Changes in requirements by financial institutions and institutional investors can present similar financial risks for companies. As many financial institutions and investors begin to set their own GHG emissions reduction goals, they may consider the total GHG emissions footprint of companies that they finance or invest in to build portfolios to meet their goals.[455] Financial institutions and investors may focus on Scopes 1 and 2 emissions for companies in some industries, particularly for industries in which Scopes 1 and 2 represent the majority of companies' total GHG emissions footprint. For other industries, however, Scope 3 emissions represent a relatively significant portion of companies' total GHG footprint, and therefore may reflect a more complete picture of companies' exposure to transition risks than Scopes 1 and 2 emissions alone. For oil and gas product manufacturers, for example, Scope 3 emissions are

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[454] *See, e.g.*, Tom Krisher and Aamer Madhani, *US automakers pledge huge increase in electric vehicles*, AP News, Aug. 5, 2021, available at https://apnews.com/article/technology-joe-biden-business-environment-and-nature-economy-88fe6ca8e333f3d00f6d2e98c6652cea (reporting that General Motors aspires to sell only electric passenger vehicles by 2035 and Ford and Stellantis (formerly Fiat Chrysler) each expect that 40% of global sales to be electric vehicles by 2030); *see also* https://www.caranddriver.com/news/g35562831/ev-plans-automakers-timeline/; and Jim Motavalli, *Every Automaker's EV Plans Through 2035 And Beyond*, Forbes, Oct. 4, 2021, available at https://www.forbes.com/wheels/news/automaker-ev-plans/.

[455] *See supra* Section I.C.1.

likely to be material and thus necessary to an understanding of a registrant's climate-related risks.

When assessing the materiality of Scope 3 emissions, registrants should consider whether Scope 3 emissions make up a relatively significant portion of their overall GHG emissions. While we are not proposing a quantitative threshold for determining materiality, we note that some companies rely on, or support reliance on, a quantitative threshold such as 40 percent when assessing the materiality of Scope 3 emissions.[456] However, even when Scope 3 emissions do not represent a relatively significant portion of overall GHG emissions, a quantitative analysis alone would not suffice for purposes of determining whether Scope 3 emissions are material. Consistent with the concept of materiality in the securities laws, this determination would ultimately need to take into account the total mix of information available to investors, including an assessment of qualitative factors. Accordingly, Scope 3 emissions may make up a relatively small portion of a registrant's overall GHG emissions but still be material where Scope 3 represents a significant risk, is subject to significant regulatory focus, or "if there is a substantial likelihood that a reasonable [investor] would consider it important." [457] Moreover, if a materiality analysis requires a determination of future impacts, *i.e.,* a transition risk yet to be realized, then both the probability of an event occurring and its magnitude should be considered. Even if the probability of an adverse consequence is relatively low, if the magnitude of loss or liability is high, then the information in question may still be material.

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[456] *See, e.g.*, letter from Uber Technologies; *see also* TCFD, *Guidance on Metrics, Targets, and Transition Plans,* at note 40, citing SBTi, *SBTi Criteria and Recommendations* (Oct. 2021), available at https://sciencebasedtargets.org/resources/files/SBTi-criteria.pdf.

[457] *TSC Industries v. Northway*, 426 U.S. at 449.

If a registrant determines that its Scope 3 emissions are not material, and therefore not subject to disclosure, it may be useful to investors to understand the basis for that determination. Further, if a registrant determines that certain categories of Scope 3 emissions are material, registrants should consider disclosing why other categories are not material. If, however, Scope 3 emissions are material, then understanding the extent of a registrant's exposure to Scope 3 emissions, and the choices it makes regarding them, would be important for investors when making investment or voting decisions.

Several commenters stated that disclosure of a registrant's Scope 3 emissions is essential to making an informed investment decision because Scope 3 emissions can indicate a registrant's exposure to climate-related transition risks.[458] For example, if policy changes lead to mandatory emissions reductions or carbon pricing, a registrant with high Scope 3 emissions could experience higher costs in sourcing key inputs. Similarly, if consumer preferences change to favor products that are less carbon intensive, a registrant could see a significant change in demand for its products. Registrants that do not account for these risks, or make suboptimal choices regarding them, could become less profitable in the future than registrants that acknowledge these risks and successfully mitigate them.[459] Thus, Scope 3 emissions disclosure could help convey to investors the potential financial risks facing a company related to any transition to a lower carbon economy. With Scope 3 information disclosed, investors would be

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[458] *See, e.g.*, letters from Confluence Philanthropy; Forum for Sustainable and Responsible Investment; Mirova US LLC; NY City Comptroller; and Wellington Management Co.

[459] *See id*.

able to assess, in conjunction with reported financial information, how GHG emissions impact the registrant's operations as well as its overall business strategy so that they can make more informed investment or voting decisions.[460]

Disclosure of Scope 3 emissions could also highlight instances where a registrant attempts to reduce its total Scopes 1 and 2 emissions by outsourcing carbon intensive activities. For example, a registrant could contract out certain high-emissions production activities so that its own Scope 1 or 2 emissions are lower than a similar company that has retained direct ownership and control over more of its production activities. Thus, Scope 3 emissions reporting could provide greater transparency and help preclude any efforts by registrants to obscure for investors the full magnitude of the climate-related risks associated with their GHG emissions.

The proposed rules would also require a registrant to disclose its Scope 3 emissions if it has set a GHG emissions reduction target or goal that includes Scope 3 emissions.[461] This disclosure requirement would enable investors to understand the scale and scope of actions the registrant may need to take to fulfill its commitment to reduce its Scope 3 emissions and the potential financial impact of that commitment on the registrant. It would also enable an investor to assess the registrant's strategy for meeting its Scope 3 emissions target or goal and its progress towards that target or goal, which may affect the registrant's business.

Scope 3 emissions disclosures would help investors to understand and assess the registrant's strategy. For example, Scope 3 emissions disclosures would allow an investor to

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460 For example, registrants that choose to mitigate climate-related risks by undertaking research and development activities to source inputs involving less GHG emissions might incur expenses in the short-term but could achieve potential long-term cost savings by implementing more energy-efficient production processes and avoiding potential penalties imposed by regulation.

461 *See* proposed 17 CFR 229.1504(c)(1).

better understand how feasible it would be for the registrant to achieve its targets through its current strategy, to track the registrant's progress over time, and to understand changes the registrant may make to its strategy, targets, or goals. Scope 3 emissions disclosures would thus be important to evaluating the financial effects of the registrant's target or goal. In addition, this disclosure could help prevent instances of greenwashing or other misleading claims concerning the potential impact of Scope 3 emissions on a registrant's business because investors, and the market would have access to a quantifiable, trackable metric.

A registrant's Scope 3 emissions disclosure, together with the proposed financial statement metrics, would also enable an investor to assess the efficiency and efficacy of the registrant's actions to achieve its target or goal (*e.g.*, by comparing the registrant's expenditures or other investments in lower carbon transition activities from year to year with any corresponding reduction in its Scope 3 emissions). If a registrant has a relatively ambitious Scope 3 emissions target, but discloses little investment in transition activities in its financial statements and little or no reduction in Scope 3 emissions from year to year, these disclosures could indicate to investors that the registrant may need to make a large expenditure or significant change to its business operations as it gets closer to its target date, or risk missing its target. Both potential outcomes could have financial ramifications for the registrant and, accordingly, investors.

The proposed disclosure requirement should also give investors the ability to evaluate whether a registrant's target or goal and its plan for achieving that target or goal could have an adverse impact on the registrant. For example, an investor might conclude that the financial costs of a registrant's plan would outweigh any benefits to the business, and factor that into how the registrant's securities fit into the investor's own investment portfolio given the investor's risk tolerance and other investment goals. Thus, the objective of this disclosure is not to drive targets, goals, plans, or conduct, but to provide investors with the tools to assess the implications of any targets, goals, or plans on the registrant in making investment or voting decisions.

This disclosure requirement could also enable investors to better compare firms. For example, two registrants may have the same total GHG emissions and have made the same commitments to reduce total GHG emissions from Scopes 1, 2, and 3 emissions combined. However, if the registrants have different proportions of emissions from Scope 1 and 2 versus Scope 3, investors might determine that there would be different costs and effects for these registrants from their disclosed plans to reduce their overall emissions.

Scope 3 emissions disclosures could also enable investors to better compare registrants' plans to achieve their Scope 3 emissions targets or goals. For example, registrants in the retail industry may have a relatively large portion of their Scope 3 emissions derived from customer travel to the registrant's stores and shipping products or goods to customers or stores. If a registrant in this industry has set Scope 3 emissions targets or goals, in order to meet those targets or goals it may choose to relocate its stores to be closer to public transportation. Another similarly situated registrant may elect to switch to using electric vehicles for shipping. A third similarly situated registrant might elect to take neither action, but instead assume Scope 3 emissions reductions based on customers' change in behavior. Investors could assess the likelihood of each of these three registrants meeting their Scope 3 emissions target or goal—as well as the likely financial and operational impact—which could depend on the amount and type of their Scope 3 emissions. Investors could also compare the potential impacts of these plans on the three different registrants. Without disclosures of the amount and type of Scope 3 emissions, investors would face difficulty assessing the likely impacts of a target or goal that includes Scope 3 emissions on registrants and comparing the relative impacts across registrants.

If required to disclose Scope 3 emissions, a registrant would be required to identify the categories of upstream and downstream activities that have been included in the calculation of its Scope 3 emissions. Consistent with the GHG Protocol,[462] the proposed rules identify several categories of activities that can give rise to Scope 3 emissions. Upstream activities from which Scope 3 emissions might result include:

- A registrant's purchased goods and services;
- A registrant's capital goods;
- A registrant's fuel and energy related activities not included in Scope 1 or Scope 2 emissions;
- Transportation and distribution of purchased goods, raw materials, and other inputs;
- Waste generated in a registrant's operations;
- Business travel by a registrant's employees;
- Employee commuting by a registrant's employees; and
- A registrant's leased assets related principally to purchased or acquired goods or services.[463]

Downstream activities from which Scope 3 emissions might result include:

- Transportation and distribution of a registrant's sold products, goods or other outputs;
- Processing by a third party of a registrant's sold products;

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462 See WBCSD and World Resources Institute, Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Sept. 2011).

463 *See* proposed 17 CFR 229.1500(r).

- Use by a third party of a registrant's sold products;
- End-of-life treatment by a third party of a registrant's sold products;
- A registrant's leased assets related principally to the sale or disposition of goods or services;
- A registrant's franchises; and
- Investments by a registrant.[464]

The list of upstream and downstream activities set forth in proposed Item 1500(r) is non-exclusive. If any upstream or downstream activities were significant to the registrant when calculating its Scope 3 emissions, the proposed rules would require it to identify such categories and separately disclose Scope 3 emissions data for each of those categories together with a total of all Scope 3 emissions.[465] For example, an energy company that produces oil and gas products may find that a significant category of activity resulting in Scope 3 emissions relates to the end use of its sold products. A manufacturer might find that a significant category of activities resulting in Scope 3 emissions relate to the emissions of its suppliers in the production of purchased goods or services, the processing of its sold products, or by the fuel consumed by its third-party transporters and distributors of those goods and services and of its sold products. In some cases, the category in which an emissions source belongs may be unclear, or the source might fit within more than one category. In those cases, registrants would need to use their best judgment as to the description of the emissions source and provide sufficient transparency as to the reasoning and methodology to facilitate investor understanding of the emissions category and source.

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[464] *See id.* The "investments" category would capture what are commonly referred to as "financed emissions."

[465] *See* proposed 17 CFR 229.1504(c)(1).

If required to disclose Scope 3 emissions, a registrant would also be required to describe the data sources used to calculate those emissions, including the use of any of the following:

- Emissions reported by parties in the registrant's value chain, and whether such reports were verified by the registrant or a third party, or unverified;
- Data concerning specific activities,[466] as reported by parties in the registrant's value chain; and
- Data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant's value chain, including industry averages of emissions, activities, or economic data.[467]

This information is intended to assist investors in assessing the reliability and accuracy of the registrant's Scope 3 emissions disclosure. For example, an investor might find emissions data related to the downstream transportation and distribution of a registrant's sold products more reliable if based on specific distances traveled by the registrant's transportation and distribution partners and company-specific emissions factors rather than estimates of distances traveled based on industry-average data and using national average emission factors. Although we recognize that a registrant may sometimes need to use industry- and national-average data when calculating its Scope 3 emissions, information about the data sources for its Scope 3 emissions would help investors better understand the risk exposure posed by the registrant's value chain in comparison with other registrants and make more informed investment decisions.

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[466] Activity data refers to a quantitative measure of a level of activity that results in GHG emissions. Depending on the activity, such data could be expressed, for example, as: liters of fuel consumed; kilowatt-hours of electricity consumed; kilograms of material consumed; kilometers of distance traveled; hours of time operated; square meters of area occupied; kilograms of waste generated; kilograms of product sold; or quantity of money spent. *See* GHG Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*, Chapter 7.

[467] *See* proposed 17 CFR 229.1504(c)(2).

We acknowledge that a registrant's material Scope 3 emissions is a relatively new type of metric, based largely on third-party data, that we have not previously required. We are proposing the disclosure of this metric because we believe capital markets have begun to assign financial value to this type of metric, such that it can be material information for investors about financial risks facing a company. Scope 3 emissions disclosure is an integral part of both the TCFD[468] framework and the GHG Protocol,[469] which are widely accepted. It also has been widely recognized that, for some companies, disclosure of just Scopes 1 and 2 emissions could convey an incomplete, and potentially misleading, picture.[470] We have attempted to calibrate our proposal to balance investors' demand for this information with the current limitations of the Scope 3 emissions data.

We also recognize, as discussed below, that the reporting of Scope 3 emissions may present more challenges than the reporting of Scopes 1 and 2 emissions. But in light of the fact that a GHG emissions reporting regime may be incomplete without the reporting of Scope 3 emissions, we are proposing to include them, with an appropriate transition period and safe harbor, at the outset. Although we have not proposed to exclude specific upstream or downstream activities from the scope of the proposed Scope 3 disclosure requirement, we have limited the proposed disclosure requirement to those value chain emissions that overall are material. We also have not proposed a bright-line quantitative threshold for the materiality determination as suggested by some commenters[471] because whether Scope 3 emissions are material would depend

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468 See, e.g., TCFD, Guidance on Metrics, Targets, and Transition Plans (Oct. 2021), Appendix 1.

469 *See, e.g.*, GHG Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard*.

470 *See, e.g.*, TCFD, *Guidance on Metrics, Targets, and Transition Plans* (Oct. 2021), Appendix 1; and letters from Apple; NY City Comptroller; and Wellington Investment Co.

471 *See, e.g.*, letter from Catavento Consultancy (stating that Scope 3 emissions disclosure should be mandatory for larger companies and for those in which Scope 3 emissions account for more than 40% of total emissions).

on the particular facts and circumstances, making it difficult to establish a “one size fits all” standard.

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93. How would investors use GHG emissions disclosures to inform their investment and voting decisions? How would such disclosures provide insight into a registrant’s financial condition, changes in financial condition, and results of operations? How would such disclosures help investors evaluate an issuer’s climate risk-related exposure? Would such disclosures enable investors to better assess physical risks associated with climate-related events, transition risks, or both types of risks?

94. Should we require a registrant to disclose its GHG emissions both in the aggregate, per scope, and on a disaggregated basis for each type of greenhouse gas that is included in the Commission’s proposed definition of “greenhouse gases,” as proposed? Should we instead require that a registrant disclose on a disaggregated basis only certain greenhouse gases, such as methane (CH_4) or hydrofluorocarbons (HFCs), or only those greenhouse gases that are the most significant to the registrant? Should we require disaggregated disclosure of one or more constituent greenhouse gases only if a registrant is obligated to separately report the individual gases pursuant to another reporting regime, such as the EPA’s greenhouse gas reporting regime or any foreign reporting regime? If so, should we specify the reporting regime that would trigger this disclosure?

95. We have proposed defining “greenhouse gases” as a list of specific gases that aligns with the GHG Protocol and the list used by the EPA and other organizations. Should other gases be included in the definition? Should we expand the definition to include any other gases to the extent scientific data establishes a similar impact on climate change with reasonable certainty?

Should we require a different standard to be met for other greenhouse gases to be included in the definition?

96. Should we require a registrant to express its emissions data in CO_2e, as proposed? If not, is there another common unit of measurement that we should use? Is it important to designate a common unit of measurement for GHG emissions data, as proposed, or should we permit registrants to select and disclose their own unit of measurement?

97. Should we require a registrant to disclose its total Scope 1 emissions and total Scope 2 emissions separately for its most recently completed fiscal year, as proposed? Are there other approaches that we should consider?

98. Should we require a registrant to disclose its Scope 3 emissions for the fiscal year if material, as proposed? Should we instead require the disclosure of Scope 3 emissions for all registrants, regardless of materiality? Should we use a quantitative threshold, such as a percentage of total GHG emissions (*e.g.*, 25%, 40%, 50%) to require the disclosure of Scope 3 emissions? If so, is there any data supporting the use of a particular percentage threshold? Should we require registrants in particular industries, for which Scope 3 emissions are a high percentage of total GHG emissions, to disclose Scope 3 emissions?

99. Should we require a registrant that has made a GHG emissions reduction commitment that includes Scope 3 emissions to disclose its Scope 3 emissions, as proposed? Should we instead require registrants that have made any GHG emissions reduction commitments, even if those commitments do not extend to Scope 3, to disclose their Scope 3 emissions? Should we only require Scope 3 emissions disclosure if a registrant has made a GHG emissions reduction commitment that includes Scope 3 emissions?

100. Should Scope 3 emissions disclosure be voluntary? Should we require Scope 3 emissions disclosure in stages, *e.g.*, requiring qualitative disclosure of a registrant's significant categories of upstream and downstream activities that generate Scope 3 emissions upon effectiveness of the proposed rules, and requiring quantitative disclosure of a registrant's Scope 3 emissions at a later date? If so, when should we require quantitative disclosure of a registrant's Scope 3 emissions?

101. Should we require a registrant to exclude any use of purchased or generated offsets when disclosing its Scope 1, Scope 2, and Scope 3 emissions, as proposed? Should we require a registrant to disclose both a total amount with, and a total amount without, the use of offsets for each scope of emissions?

102. Should we require a registrant to disclose its Scope 3 emissions for each separate significant category of upstream and downstream emissions as well as a total amount of Scope 3 emissions for the fiscal year, as proposed? Should we only require the disclosure of the total amount of Scope 3 emissions for the fiscal year? Should we require the separate disclosure of Scope 3 emissions only for certain categories of emissions and, if so, for which categories?

103. Should the proposed rules include a different standard for requiring identification of the categories of upstream and downstream emissions, such as if those categories of emissions are significant to total GHG emissions or total Scope 3 emissions? Are there any other categories of, or ways to categorize, upstream or downstream emissions that a registrant should consider as a source of Scope 3 emissions? For example, should we require a registrant to disclose Scope 3 emissions only for categories of upstream or downstream activities over which it has influence or indirect control, or for which it can quantify emissions with reasonable reliability? Are there any

proposed categories of upstream or downstream emissions that we should exclude as sources of Scope 3 emissions?

104. Should we, as proposed, allow a registrant to provide their own categories of upstream or downstream activities? Are there additional categories, other than the examples we have identified, that may be significant to a registrant's Scope 3 emissions and that should be listed in the proposed rule? Are there any categories that we should preclude, *e.g.*, because of lack of accepted methodologies or availability of data? Would it be useful to allow registrants to add categories that are particularly significant to them or their industry, such as Scope 3 emissions from land use change, which is not currently included in the Greenhouse Gas Protocol's Scope 3 categories? Should we specifically add an upstream emissions disclosure category for land use?

105. Should we require the calculation of a registrant's Scope 1, Scope 2, and/or Scope 3 emissions to be as of its fiscal year end, as proposed? Should we instead allow a registrant to provide its GHG emissions disclosures according to a different timeline than the timeline for its Exchange Act annual report? If so, what should that timeline be? For example, should we allow a registrant to calculate its Scope 1, Scope 2, and/or Scope 3 emissions for a 12-month period ending on the latest practicable date in its fiscal year that is no earlier than three months or, alternatively, six months prior to the end of its fiscal year? Would allowing for an earlier calculation date alleviate burdens on a registrant without compromising the value of the disclosure? Should we allow such an earlier calculation date only for a registrant's Scope 3 emissions? Would the fiscal year end calculations required for a registrant to determine if Scope 3 emissions are material eliminate the benefits of an earlier calculation date? Should we instead require a registrant to provide its GHG emissions disclosures for its most recently completed

fiscal year one, two, or three months after the due date for its Exchange Act annual report in an amendment to that report?

106. Should we require a registrant that is required to disclose its Scope 3 emissions to describe the data sources used to calculate the Scope 3 emissions, as proposed? Should we require the proposed description to include the use of: (i) emissions reported by parties in the registrant's value chain, and whether such reports were verified or unverified; (ii) data concerning specific activities, as reported by parties in the registrant's value chain; and (iii) data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant's value chain, including industry averages of emissions, activities, or economic data, as proposed? Are there other sources of data for Scope 3 emissions the use of which we should specifically require to be disclosed? For purposes of our disclosure requirement, should we exclude or prohibit the use of any of the proposed specified data sources when calculating Scope 3 emissions and, if so, which ones?

107. Should we require a registrant to provide location data for its disclosed sources of Scope 1, Scope 2, and Scope 3 emissions if feasible? If so, should the feasibility of providing location data depend on whether it is known or reasonably available pursuant to the Commission's existing rules (Securities Act Rule 409 and Exchange Act Rule 12b-21)? Would requiring location data, to the extent feasible, assist investors in understanding climate-related risks, and in particular, likely physical risks, associated with a registrant's emissions' sources? Would a requirement to disclose such location data be duplicative of any of the other disclosure requirements that we are proposing?

108. If we require a registrant to provide location data for its GHG emissions, how should that data be presented? Should the emissions data be grouped by zip code separately for each

scope? Should the disclosure be presented in a cartographic data display, such as what is commonly known as a "heat map"? If we require a registrant to provide location data for its GHG emissions, should we also require additional disclosure about the source of the emissions?

c. GHG Intensity

In addition to requiring the disclosure of its GHG emissions in gross terms, the proposed rules would also require a registrant to disclose the sum of its Scopes 1 and 2 emissions in terms of GHG intensity.[472] If required to disclose Scope 3 emissions, a registrant would also be required to separately disclose its Scope 3 emissions in terms of GHG intensity.[473] GHG intensity disclosure should provide context to a registrant's emissions in relation to its business scale (*e.g.,* emissions per economic output). For example, car manufacturer A may generate more emissions in terms of CO_2e than car manufacturer B; however, when analyzing an intensity metric (emissions per unit of production), it becomes apparent that car manufacturer A actually has a lower emission rate per car produced than car manufacturer B, which indicates a registrant's emission efficiency. Because emission efficiency can be a potential indicator of the likelihood of the registrant being impacted by transition risks, such GHG intensity disclosure could provide decision-useful information to investors. In addition, the proposed GHG intensity disclosure would provide a standardized method for presenting such measure of efficiency across

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[472] *See* proposed 17 CFR 229.1504(d)(1).

[473] *See* proposed 17 CFR 229.1504(d)(2). The proposed safe harbor for Scope 3 emissions disclosure would apply to this proposed GHG intensity metric for Scope 3 emissions. *See infra* Section II.C.3.

registrants, which should facilitate comparability of the registrant's emissions efficiency over time.

The proposed rules would define "GHG intensity" (or "carbon intensity") to mean a ratio that expresses the impact of GHG emissions per unit of economic value (*e.g.*, metric tons of CO_2e per unit of total revenues, using the registrant's reporting currency) or per unit of production (*e.g.*, metric tons of CO_2e per unit of product produced).[474] For purposes of standardizing the disclosure and facilitating its comparability, we are proposing to require the disclosure of GHG intensity in terms of metric tons of CO_2e per unit of total revenue and per unit of production for the fiscal year.[475] Total revenue is one of the most commonly used and understood financial metrics when investors analyze a registrant's financial results and applies to most registrants (depending on the nature and maturity of the business) and therefore would be a good common denominator for the intensity calculation. The selected unit of production should be relevant to the registrant's industry to facilitate investor comparison of the GHG intensity of companies within an industry without regard to registrant size. Investors may find such a comparison to be useful to making informed investment decisions to the extent that a registrant within a particular industry that has a lower GHG intensity relative to its peers that face fewer climate-related risks.

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[474] *See* proposed 17 CFR 229.1500(i). We derived this proposed definition from the GHG Protocol. *See* GHG Protocol, *A Corporate Accounting and Reporting Standard*, Chapter 9.

[475] *See* proposed 17 CFR 229.1504(d)(1).

If the registrant has no revenue for a fiscal year, it would be required to calculate its GHG intensity with another financial measure (*e.g.,* total assets), with an explanation of why the particular measure was used. Similarly, if the registrant does not have a unit of production, it would be required to calculate its GHG intensity with another measure of economic output, depending on the nature of its business (*e.g.*, data processing capacity, volume of products sold, or number of occupied rooms) with an explanation of why the particular measure was used.[476]

A registrant could also voluntarily disclose other additional measures of GHG intensity, including non-financial measures such as economic output, provided it includes an explanation of the reasons why those particular GHG intensity measures were used and why the registrant believes such measures provide useful information to investors.[477] In all cases, the registrant would be required to disclose the methodology and other information required pursuant to the proposed GHG emissions metrics instructions.[478]

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109. Should we require a registrant to disclose the intensity of its GHG emissions for the fiscal year, with separate calculations for (i) the sum of Scope 1 and Scope 2 emissions and, if applicable (ii) its Scope 3 emissions (separately from Scopes 1 and 2), as proposed? Should we define GHG intensity, as proposed? Is there a different definition we should use for this purpose?

110. Should we require the disclosed GHG intensity to be expressed in terms of metric tons of CO_2e per unit of total revenue, as proposed? Should we require a different financial measure

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[476] *See* proposed 17 CFR 229.1504(d)(3).

[477] *See* proposed 17 CFR 229.1504(d)(4).

[478] *See* proposed 17 CFR 229.1504(e)(1) and *infra* Section II.G.2 for the proposed disclosure requirements pertaining to GHG emissions methodology.

of GHG intensity and, if so, which measure? For example, should GHG intensity be expressed in terms of metric tons of CO_2e per unit of total assets?

111. Should we require the disclosed GHG intensity to be expressed in terms of metric tons of CO_2e per unit of production, as proposed? Would such a requirement facilitate the comparability of the disclosure? Should we require a different economic output measure of GHG intensity and, if so, which measure? For example, should GHG intensity be expressed in terms of metric tons of CO_2e per number of employees? Should we require the GHG intensity to be expressed per unit of production relevant to the registrant's business (rather than its industry)? Is further guidance needed on how to comply with the proposed requirement? Would requiring GHG intensity to be expressed in terms of metrics tons of CO_2e per unit of production require disclosure of commercially sensitive or competitively harmful information?

112. Should we require a registrant with no revenue or unit of production for a fiscal year to disclose its GHG intensity based on, respectively, another financial measure or measure of economic output, as proposed? Should we require such a registrant to use a particular financial measure, such as total assets, or a particular measure of economic output, such as total number of employees? For registrants who may have minimal revenue, would the proposed calculation result in intensity disclosure that is confusing or not material? Should additional guidance be provided with respect to such instances?

113. Should we permit a registrant to disclose other measures of GHG intensity, in addition to the required measures, as long as the registrant explains why it uses the particular measure of GHG intensity and discloses the corresponding calculation methodology used, as proposed?

d. GHG Emissions Data for Historical Periods

The proposed rules would require disclosure to be provided for the registrant's most recently completed fiscal year and for the historical fiscal years included in the registrant's consolidated financial statements in the applicable filing, to the extent such historical GHG emissions data is reasonably available.[479] Requiring historical GHG emissions data, to the extent available, would provide useful information for investors by enabling investors to track over time the registrant's exposure to climate-related impacts represented by the yearly emissions data, and to assess how it is managing the climate-related risks associated with those impacts. Requiring GHG emissions disclosure for current and, when reasonably available, historical periods should enable investors to analyze trends in the impacts of material climate-related risks and to evaluate the narrative disclosure provided pursuant to proposed Item 1502.[480] Historical GHG emissions data also could be particularly useful when a registrant has announced a target or goal for reducing GHG emissions by a certain date by helping investors assess its progress in meeting that target or goal and the related impacts on the registrant.

Linking the required number of years of historical GHG emissions data to the historical periods required in the consolidated financial statements should benefit investors by requiring emissions data that is consistent with the financial statement metrics in the filing. This should help investors connect GHG emissions with the financial performance of a registrant in the same period, including the proposed financial statement metrics. Moreover, although we are not proposing to require the GHG emissions data to be included in the registrant's consolidated financial statements, we nevertheless believe that the GHG emissions data is relevant to, and

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[479] *See* proposed 17 CFR 229.1504(a).

[480] *See supra* Section II.C for a discussion of proposed 17 CFR 229.1502.

would be read in conjunction with, information included in the consolidated financial statements. Just as data about a registrant's revenues and expenses on its income statement reflect its activities in financial terms for a given year, a registrant's emissions data reflect its carbon footprint activities for that year. For this reason, we have proposed requiring a registrant to provide its GHG emissions data for the same number of years as it is required to provide data on its income statement and cash flow statement, to the extent such emissions data is reasonably available. For example, a registrant that is required to include income statements and cash flow statements at the end of its three most recent fiscal years would be required to disclose three years of its Scope 1, Scope 2 and, if material to the registrant or if it has set a GHG emissions target or goal that includes its Scope 3 emissions, its Scope 3 emissions, expressed both in absolute terms and in terms of intensity.[481] If the registrant is a SRC, only two years of Scopes 1 and 2 emissions metrics would be required.[482]

A registrant, however, would not otherwise be required to provide a corresponding GHG emissions metric for a fiscal year preceding its current reporting fiscal year if, for example, it was not required to and has not previously presented such metric for such fiscal year and the historical information necessary to calculate or estimate such metric is not reasonably available to the registrant without unreasonable effort or expense.[483]

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481 Alternatively, if a registrant has no revenue, and it decides to calculate GHG intensity using total assets, we believe it would be appropriate for that registrant to provide its GHG intensity for the same number of years as are required on its balance sheets (*i.e.*, two years if not a SRC).

482 We are proposing to exempt SRCs from Scope 3 disclosures. *See infra* Section II.G.3.

483 *See* Securities Act Rule 409 and Exchange Act Rule 12b-21.

114. Should we require GHG emissions disclosure for the registrant's most recently completed fiscal year and for the appropriate, corresponding historical fiscal years included in the registrant's consolidated financial statements in the filing, to the extent such historical GHG emissions data is reasonably available, as proposed? Should we instead only require GHG emissions metrics for the most recently completed fiscal year presented in the relevant filing? Would requiring historical GHG emissions metrics provide important or material information to investors, such as information allowing them to analyze trends?

2. GHG Emissions Methodology and Related Instructions

The proposed rules would require a registrant to describe the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics.[484] As proposed, the description of the registrant's methodology must include the registrant's organizational boundaries, operational boundaries, calculation approach, and any calculation tools used to calculate the registrant's GHG emissions.[485] Organizational boundaries would be defined to mean the boundaries that determine the operations owned or controlled by a registrant for the purpose of calculating its GHG emissions.[486] Operational boundaries would be defined to mean the boundaries that determine the direct and indirect emissions associated with the business operations owned or controlled by a registrant.[487] This information should help investors understand the scope of a registrant's operations included in its GHG emissions metrics and how those metrics were measured. With this information, investors could more knowledgeably

[484] *See* proposed 17 CFR 229.1504(e)(1).

[485] *See id*.

[486] *See* proposed 17 CFR 229.1500(m).

[487] *See* proposed 17 CFR 229.1500(l).

compare a registrant's GHG emissions metrics with the GHG emissions metrics of other registrants and make more informed investment decisions.

a. The Setting and Disclosure of Organizational Boundaries

The proposed rules would require a registrant to disclose its Scope 1 emissions and its Scope 2 emissions separately after calculating them from all sources that are included in the registrant's organizational and operational boundaries.[488] An initial step for many registrants may be to set their organizational boundaries.[489] Those boundaries determine the business operations owned or controlled by a registrant to be included in the calculation of its GHG emissions.[490] Because both Scope 1 and Scope 2 emissions relate to the operations owned or controlled by a registrant, setting a registrant's organizational boundaries is an important part of determining its Scopes 1 and 2 emissions.

Several commenters stated that the GHG Protocol's standards and guidance would provide an appropriate framework for reporting GHG emissions if the Commission required disclosure of GHG emissions.[491] A company following the GHG Protocol would base its organizational boundaries on either an equity share approach or a control approach.[492] Our

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488 *See* proposed 17 CFR 229.1504(b)(1).

489 See GHG Protocol, Corporate Accounting and Reporting Standard, Chapter 3.

490 *See* proposed 17 CFR 229.1500(m).

491 *See supra* note 111.

492 Under the GHG Protocol's equity share approach, a company accounts for GHG emissions from operations according to its share of equity in the operation. Under the GHG Protocol's control approach, a company accounts for 100% of the GHG emissions from operations over which it has control. A company can choose to define control either in financial or operational terms. *See GHG Protocol, Corporate Accounting and Reporting Standard,* Chapter 3.

proposed approach, however, would require a registrant to set the organizational boundaries for its GHG emissions disclosure using the same scope of entities, operations, assets, and other holdings within its business organization as those included in, and based upon the same set of accounting principles applicable to, its consolidated financial statements.[493]

For similar reasons to those noted above regarding the proposed time periods required for GHG emissions disclosure, we propose requiring the scope of consolidation and reporting to be consistent for financial data and GHG emissions data. This would be accomplished by applying existing GAAP.[494] Requiring a consistent approach should help avoid potential investor confusion about the reporting scope used in determining a registrant's GHG emissions and the reporting scope used for the financial statement metrics, which are included in the financial statements. Applying existing GAAP could help limit the compliance burden for registrants as they would be able to use familiar concepts from financial reporting when preparing their required GHG emissions disclosures. Requiring registrants to follow the scope of reporting used in their financial statements should also enhance comparability across registrants when compared with the multiple options available under the GHG Protocol.

Thus, as proposed, the scope of reporting for a registrant's GHG emissions metrics would be consistent with the scope of reporting for the proposed financial statement metrics and other financial data included in its consolidated financial statements in order to provide investors a consistent view of the registrant's business across its financial and GHG emissions disclosures. For example, a registrant that prepares its financial statements pursuant to U.S. GAAP would

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[493] *See* proposed 17 CFR 229.1504(e)(2).

[494] Foreign private issuers that file consolidated financial statements under IFRS as issued by the IASB would apply IFRS under the proposed rules as the basis for setting its organizational boundaries for the purpose of providing the proposed GHG emissions disclosure.

apply relevant guidance from U.S. GAAP (*e.g.*, FASB ASC Topic 810 *Consolidation* and FASB ASC Topic 323 *Investments –Equity Method and Joint Ventures*) when determining which entities would be subject to consolidation or which investments qualify for equity method accounting or proportionate consolidation.[495] Therefore, under the proposed rules a registrant would be required to include all of the emissions from an entity that it consolidates.[496] For an equity method investee or an operation that is proportionally consolidated, the registrant would be required to include its share of emissions based on its percentage ownership of such investee or operation.[497] For a registrant that applies the equity method to an investee, the percentage of ownership interest used to record its share of earnings or losses in the investee must be the same for measuring its share of GHG emissions by the equity method investee.[498] The proposed rules would permit a registrant to exclude emissions from investments that are not consolidated, are not proportionately consolidated, or that do not qualify for the equity method of accounting in the registrant's consolidated financial statements.[499]

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495 Issuers that are permitted to, and do, apply IFRS issued by the International Accounting Standards Board would apply the IASB's equivalent standards. *See, e.g.,* IFRS 10 *Consolidated Financial Statements,* IFRS 11 *Joint Arrangements* and International Accounting Standards ("IAS") 28 *Investments in Associates and Joint Ventures. See supra* note 319, which states that foreign private issuers that file consolidated financial statements under home country GAAP and reconcile to U.S. GAAP, would be required to use U.S. GAAP as the basis for calculating and disclosing the proposed climate-related financial statement metrics. The same requirement would apply for the purpose of determining the proposed GHG emissions metrics.

496 *See* proposed 17 CFR 229.1504(e)(2).

497 *See id*.

498 *See id*.

499 *See* proposed 17 CFR 229.1504(b)(2).

For example, a registrant might own or control several plants but have only a minority ownership in another plant over which it has no control. For the plants that are owned or controlled by the registrant, all of those plants' direct and indirect emissions should be included in its Scopes 1 and 2 emissions disclosure (regardless of ownership percentage that resulted in consolidation for financial statement purposes).[500] If the registrant's proportional interest in the latter plant is reflected in its consolidated financial statements (*e.g.,* the investment qualifies for the equity method or a proportionate consolidation approach), when calculating its Scopes 1 and 2 emissions the registrant should include such proportional share (based on ownership interest) of that plant's emissions in the total of each of its Scopes 1 and 2 emissions.[501]

A related provision under the proposed rules would require a registrant to use the same organizational boundaries when calculating its Scope 1 emissions and Scope 2 emissions[502] since both sets of emissions relate to operations that a registrant owns or controls. If required to disclose its Scope 3 emissions, a registrant would also be required to apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control and which must be included in the calculation of its Scope 3 emissions.[503] Requiring a registrant to use the same organizational boundaries when calculating its Scopes 1, 2 and 3 emissions should help limit investor confusion over those operations or

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[500] *See* proposed 17 CFR 229.1500(m) (defining organizational boundaries as the boundaries that determine the operations owned or controlled by a registrant) and 17 CFR 229.1504(b)(1) (requiring the disclosure of Scopes 1 and 2 emissions separately after calculating them from all sources included in a registrant's organizational and operational boundaries).

[501] *See* proposed 17 CFR 229.1504(e)(2).

[502] *See* proposed 17 CFR 229.1504(e)(3).

[503] *See id*.

activities over which it has ownership or control (sources of its Scopes 1 and 2 emissions) and those activities in its value chain over which it lacks ownership or control (sources of its Scope 3 emissions). The proposed provision also would provide that, once a registrant has determined its organizational (and operational) boundaries, it must consistently use those boundaries when calculating its GHG emissions.[504] This proposed provision should help investors track and compare a registrant's GHG emissions over time.

b. The Setting and Disclosure of Operational Boundaries

When describing the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics, a registrant is required to describe its operational boundaries.[505] This would involve identifying emissions sources within its plants, offices, and other operational facilities that fall within its organizational boundaries, and then categorizing the emissions as either direct or indirect emissions. For example, a registrant might have direct emissions from one or more of the following sources that it owns or controls:

- Stationary equipment (from the combustion of fuels in boilers, furnaces, burners, turbines, heaters, and incinerators);
- Transportation (from the combustion of fuels in automobiles, trucks, buses, trains, airplanes, boats, ships, and other vessels);

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[504] *See id*.

[505] *See* proposed Item 1504(e)(1).

- Manufacturing processes (from physical or chemical processes, such as CO_2 from the calcination process in cement manufacturing or from catalytic cracking in petrochemical processing, and PFC emissions from aluminum smelting); and
- Fugitive emission sources (equipment leaks from joints, seals, packing, gaskets, coal piles, wastewater treatment, pits, cooling towers, and gas processing facilities, and other unintentional releases).[506]

Most registrants would likely have emission sources from stationary equipment and transportation devices. Registrants in certain industrial sectors, such as cement, aluminum, and other manufacturers, or oil and gas production and refining, are likely also to produce emissions from physical or chemical processes. Some registrants would likely have emissions from all four types of sources, particularly if they have their own power generation or waste treatment facilities.[507]

The proposed rules would require a registrant to include its approach to categorizing its emissions and emissions sources when describing its methodology to determine its operational boundaries.[508] A registrant could use the above non-exclusive list of emissions sources or other categories of emissions sources as long as it describes how it determined the emissions to include as direct emissions, for the purpose of calculating its Scope 1 emissions, and indirect emissions, for the purpose of calculating its Scope 2 emissions.[509] For most registrants, purchased electricity would likely constitute a large percentage of their Scope 2 emissions. Although Scope

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[506] This non-exclusive list of possible emissions sources is based on categories of emissions sources provided in the GHG Protocol. *See* GHG Protocol, *Corporate Accounting and Reporting Standard*, Chapter 6.

[507] *See id*.

[508] *See* proposed 17 CFR 229.1504(e)(1).

[509] *See id*.

2 emissions are generated from a source external to a registrant, the electricity (or steam, heat, or cooling) is consumed by the registrant's operations that it owns or controls.

c. The Selection and Disclosure of a GHG Emissions Calculation Approach, including Emission Factors

In addition to setting its organizational and operational boundaries, a registrant would need to select a GHG emissions calculation approach. While the direct measurement of GHG emissions from a source by monitoring concentration and flow rate is likely to yield the most accurate calculations, due to the expense of the direct monitoring of emissions, an acceptable and common method for calculating emissions involves the application of published emission factors to the total amount of purchased fuel consumed by a particular source.[510] The proposed rules would define "emission factor" as a multiplication factor allowing actual GHG emissions to be calculated from available activity data or, if no activity data is available, economic data, to derive absolute GHG emissions.[511] Emission factors are ratios that typically relate GHG emissions to a proxy measure of activity at an emissions source. Examples of activity data reflected in emission factors include kilowatt-hours of electricity used, quantity of fuel used, output of a process, hours of operation of equipment, distance travelled, and floor area of a building.[512] If no activity data is available, a registrant may use an emission factor based on economic data.[513] For example,

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[510] *See, e.g.*, GHG Protocol, Corporate Accounting and Reporting Standard, Chapter 6.

[511] *See* proposed 17 CFR 229.1500(e).

[512] *See id*.

[513] *See id*.

when calculating Scope 3 emissions from purchased goods or services, a registrant could determine the economic value of the goods or services purchased and multiply it by an industry average emission factor (expressed as average emissions per monetary value of goods or services).[514]

The EPA has published a set of emission factors based on the particular type of source (*e.g.*, stationary combustion, mobile combustion, refrigerants, and electrical grid, among others) and type of fuel consumed (*e.g.*, natural gas, coal or coke, crude oil, and kerosene, among many others).[515] The GHG Protocol's own set of GHG emission calculation tools are based in part on the EPA's emission factors.[516] Whatever set of emission factors a registrant chooses to use, it must identify the emission factors and its source.[517]

After a registrant has selected a calculation approach (*i.e.*, direct measurement or application of emissions factors), the registrant would determine what data must be collected and how to conduct the relevant calculations, including whether to use any publicly-available calculation tools. In this regard, we note that there are a number of publicly-available calculation

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514 *See, e.g.*, Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard*, Chapter 1 (describing the "spend-based method" for calculating emissions from purchased goods or services).

515 *See* EPA, Emission Factors for Greenhouse Gas Inventories (Apr. 2021), available at https://www.epa.gov/sites/default/files/2021-04/documents/emission-factors_apr2021.pdf.

516 *See, e.g.*, The Greenhouse Gas Protocol, *GHG Emission Calculation Tool* (Mar. 2021), *available at* https://ghgprotocol.org/calculation-tools.

517 *See* proposed 17 CFR 229.1504(e)(1).

tools a registrant may elect to utilize in determining its GHG emissions.[518] Finally, a registrant would gather and report GHG emissions up to the corporate level.

For example, when determining its Scope 1 emissions for a particular plant, a registrant might add up the amount of natural gas consumed by furnaces and other stationary equipment during its most recently completed fiscal year and then apply the CO_2 emission factor for natural gas to that total amount to derive the amount of GHG emissions expressed in CO_2e. The registrant would repeat this process for each type of fuel consumed and for each type of source. If a registrant owns a fleet of trucks, it might total the amount of diesel fuel or other type of gasoline consumed for the fiscal year and apply the appropriate CO_2 emission factor for that vehicle and type of fuel. A registrant that uses refrigerants also might apply the appropriate emission factor for the particular type of refrigerant to the total amount of that refrigerant used during the fiscal year. As part of the roll-up process for a registrant with multiple entities and emission sources, once it has determined the amount of CO_2e for each type of direct emissions source and for each facility within its organizational and operational boundaries, the registrant

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[518] *See, e.g.*, GHG Protocol, *Corporate Accounting and Reporting Standard*, *Chapter* 6 (providing an overview of calculation tools by type of source (*e.g.*, for stationary combustion, mobile combustion, and air conditioning and refrigeration use) and by sector (*e.g.*, for aluminum production, iron and steel production, cement manufacturing, and pulp and paper production), which are available on the GHG Protocol website at https://ghgprotocol.org/. The EPA also has published a Simplified GHG Emissions Calculator that is designed as a simplified calculation tool to help small businesses and low emitter organizations estimate and inventory their annual GHG emissions. *See* EPA, Simplified GHG Emissions Calculator (2021), available at https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator.

would then add them together to derive the total amount of Scope 1 emissions for the fiscal year.[519]

A registrant would undergo a similar process when calculating its Scope 2 emissions for its most recently completed fiscal year. There are two common methods for calculating Scope 2 emissions for purchased electricity: the market-based method and the location-based method.[520] Pursuant to the market-based method, a registrant would calculate its Scope 2 emissions based on emission factors and other data provided by the generator of electricity from which the registrant has contracted to purchase the electricity and which are included in the contractual instruments. Pursuant to the location-based method, a registrant would calculate its Scope 2 emissions based on average energy generation emission factors for grids located in defined geographic locations, including local, subnational, or national boundaries.[521] A registrant could use either of these methods, both methods, a combination, or another method as long as it identifies the method used and its source.[522] For example, if using the location-based method, the registrant would apply an appropriate emission factor for the electricity grid in its region to

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519 As noted earlier, a registrant that is required to report its direct emissions to the EPA may be able to use the EPA-provided data, together with data for any direct emissions not reported to the EPA, to help fulfill the Commission's proposed Scope 1 emission disclosure requirement.

520 *See* World Resources Institute, *GHG Protocol Scope 2 Guidance* (2015), Chapter 4, available at https://ghgprotocol.org/sites/default/files/standards/Scope%202%20Guidance_Final_Sept26.pdf.

521 *See id*.

522 We note that, pursuant to the GHG Protocol, and as referenced by the EPA, a company that determines its Scope 2 emissions using a market-based approach would also calculate those emissions using the location-based method to provide a more complete picture of the company's Scope 2 emissions. *See* World Resources Institute, *GHG Protocol Scope 2 Guidance*, Chapter 7; and EPA Center for Corporate Climate Leadership, *Scope 1 and Scope 2 Inventory Guidance*.

the total amount of electricity purchased from that grid during its fiscal year.[523] The registrant would then calculate the amount of CO_2e from purchased steam/heat, if any, by applying the appropriate emission factor for that type of energy source to the total amount consumed.[524] The registrant would report the sum of its CO_2e from purchased electricity and steam/heat as its total Scope 2 emissions for the fiscal year.

As noted above, in all instances a registrant would be required to describe its methodology, including its organizational and operational boundaries, calculation approach (including any emission factors used and the source of the emission factors), and any calculation tools used to calculate the GHG emissions.[525] Requiring a registrant to describe its methodology for determining its GHG emissions should provide investors with important information to assist them in evaluating the registrant's GHG emissions disclosure as part of its overall business and financial disclosure. Such disclosure should enable investors to evaluate the reasonableness and accuracy of the emission disclosures, and should promote consistency and comparability over time. For example, an investor would be able to evaluate both if the registrant's selection of an emission factor is reasonable given the registrant's industry sector and whether changes in reported emissions reflect changes in actual emissions in accordance with its strategy or simply a change in calculation methodology.

Like registrants in other sectors, registrants in the financial sector would be required to disclose their Scope 3 emissions if those emissions are material and to describe the methodology

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523 *See, e.g.*, EPA, *Emission Factors for Greenhouse Gas Inventories*, Table 6, which provides emission factors for regional electrical grids.

524 *See, e.g.*, EPA, *Emission Factors for Greenhouse Gas Inventories*, Table 7, which provides emission factors for steam and heat.

525 *See* proposed 17 CFR 229.1504(e)(1).

used to calculate those emissions. A financial registrant's Scope 3 emissions disclosures would likely include the emissions from companies that the registrant provides debt or equity financing to ("financed emissions"). While financial registrants may use any appropriate methodology to calculate its Scope 3 emissions, the Partnership for Carbon Accounting Financials' Global GHG Accounting & Reporting Standard (the "PCAF Standard") provides one methodology that complements the GHG Protocol and assists financial institutions in calculating their financed emissions.[526] The PCAF Standard was developed to work with the calculation of Scope 3 emissions for the "investment" category of downstream emissions and was endorsed by the drafters of the GHG Protocol.[527] The PCAF Standard covers six asset classes: listed equity and corporate bonds; business loans and unlisted equity; project finance; commercial real estate; mortgages; and motor vehicle loans.[528]

At this time we are not proposing to require a particular methodology for the financial sector in order to provide a financial sector registrant the flexibility to choose the methodology that best suits its particular portfolio and financing activities. We believe the proposed

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[526] *See* PCAF, *Global GHG Accounting & Reporting Standard for the Financial Industry* (2020), available at https://carbonaccountingfinancials.com/files/downloads/PCAF-Global-GHG-Standard.pdf .

[527] *See id*. *See also* GHG Protocol Press Release, *New Standard Developed to Help Financial Industry Measure and Report Emissions* (Mar. 2021), *available at* https://ghgprotocol.org/blog/new-standard-developed-help-financial-industry-measure-and-report-emissions.

[528] While the guidance provided by the PCAF Standard for each asset class differs in certain respects, the PCAF Standard applies a common set of principles across the various asset classes. A key principle is that the GHG emissions from a client's activities financed by loans or investments attributable to the reporting financial institution should be allocated to that institution based on its proportional share of lending or investment in the borrower or investee through the application of an "attribution factor." *See* PCAF, *Global GHG Accounting & Reporting Standard for the Financial Industry* (2020), Sections 4.2 and 5.

requirement to disclose the methodology used (*e.g.,* the PCAF Standard or another standard) would provide sufficient information to an investor.

d. Additional Rules Related to Methodology Disclosure

We are proposing additional rules related to the methodology for calculating GHG emissions. Some of these rules would apply generally to the determination of GHG emissions while some would apply specifically to the calculation of Scope 3 emissions. For example, one proposed rule would provide that a registrant may use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the estimates.[529] While we encourage registrants to provide as accurate a measurement of its GHG emissions as is reasonably possible, we recognize that, in many instances, direct measurement of GHG emissions at the source, which would provide the most accurate measurement, may not be possible.

Several commenters indicated that a registrant may find it difficult to complete its GHG emissions calculations for its most recently completed fiscal year in time to meet its disclosure obligations for that year's Exchange Act annual report.[530] The proposed rules would permit a registrant to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter if no actual reported data is reasonably available, together with actual, determined GHG emissions data for its first three fiscal quarters when disclosing its GHG emissions for its most recently

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[529] *See* proposed 17 CFR 229.1504(e)(4).

[530] *See, e.g.*, letters from Cisco; Dow; Energy Infrastructure Council; National Mining Association; Newmont Corporation; and United Airlines Holdings, Inc.

completed fiscal year, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.[531] We believe that this proposed provision would help address the concerns of commenters about the timely completion of both the work required to disclose a registrant's GHG emissions as of its fiscal year-end and to meet its other Exchange Act annual reporting obligations.[532]

Another proposed provision would require a registrant to disclose, to the extent material and as applicable, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions.[533] While this proposed provision would be most relevant to the disclosure of Scope 3 emissions, where the use of third-party data is common, it would apply in other instances when third-party data is material to the GHG emissions determination, such as when determining Scope 2 emissions using contractual, supplier-provided emission factors for purchased electricity. When disclosing the use of third-party data, a registrant would be required to identify the source of the data and the process the registrant undertook to obtain and assess such data.[534] This information would help investors better understand the basis for, and assess the reasonableness of, the GHG emissions determinations and, accordingly, evaluate the GHG disclosures as part of a registrant's business and financial information.

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531 *See* proposed 17 CFR 229.1504(e)(4)(i). One commenter made a similar recommendation when stating that a registrant should be required to follow the same timeline for disclosure of its GHG emissions as for its Exchange Act annual reporting obligations. *See* letter from Pricewaterhouse Coopers.

532 *See supra* note 530.

533 *See* proposed 17 CFR 229.1504(e)(5).

534 *See id*.

One proposed provision would require a registrant to disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous fiscal year.[535] For example, if a registrant uses a different set of emission factors, or develops a more direct method of measuring GHG emissions, which results in a material change to the GHG emissions produced from the previous year under (or assuming) the same organizational and operational boundaries, it would be required to report that change. This should help investors more knowledgeably compare the emissions data from year to year and better understand the nature and significance of a material change in emissions (*i.e.*, was the change primarily due to an implementation of strategy or a change in methodology).

Another proposed provision would require a registrant to disclose, to the extent material and as applicable, any gaps in the data required to calculate its GHG emissions.[536] This proposed provision would be particularly relevant to a registrant's Scope 3 emissions. While a registrant's GHG emissions disclosure should provide investors with a reasonably complete understanding of the registrant's GHG emissions in each scope of emissions, as previously noted, we recognize that a registrant may encounter data gaps, particularly when calculating its Scope 3 emissions. The proposed provision would require the registrant to disclose the data gaps and discuss whether it used proxy data or another method to address such gaps. A registrant would also be required to discuss how its accounting for any data gaps has affected the accuracy or completeness of its GHG emissions disclosure.[537] This information should help investors understand certain underlying uncertainties and limitations, and evaluate the corresponding

[535] *See* proposed 17 CFR 229.1504(e)(6).

[536] *See* proposed 17 CFR 229.1504(e)(7).

[537] *See id*.

reliability, of a registrant's GHG emissions disclosure, particularly for its Scope 3 emissions, as part of their assessment of the registrant's business and financial information.

One proposed provision would provide that, when determining whether its Scope 3 emissions are material, and when disclosing those emissions, in addition to emissions from activities in its value chain, a registrant must include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing.[538] This proposed approach, which is consistent with the GHG Protocol,[539] would help ensure that investors receive a complete picture of a registrant's carbon footprint by precluding the registrant from excluding emissions from activities that are typically conducted as part of operations over which it has ownership or control but that are outsourced in order to reduce its Scopes 1 or 2 emissions.

Another proposed provision would provide that, if a registrant is required to disclose Scope 3 emissions, and if there was any significant overlap in the categories of activities producing the Scope 3 emissions, the registrant must describe the overlap, how it accounted for the overlap, and its disclosed total Scope 3 emissions.[540] For example, a mining registrant may mine and process iron ore for conversion into steel products. Because the processing of iron ore and steelmaking both require the use of coal, GHG emissions would arise both from the downstream activities involving the processing of sold products and the use of sold products (*i.e.*, the use of iron ore in the production of steel). If the registrant has allocated GHG emissions to both categories (*i.e.*, processing of sold products and use of sold products), it would be

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538 *See* proposed 17 CFR 229.1504(e)(8).

539 *See* Greenhouse Gas Protocol, *Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Supplement to the GHG Protocol Corporate Accounting and Reporting Standard*, Chapter 6.

540 *See* proposed 17 CFR 229.1504(e)(9).

required to describe the overlap in emissions between the two categories of downstream activities, how it accounted for the overlap, and the effect on its disclosed total Scope 3 emissions. For example, if the total reported Scope 3 emissions involved some double-counting because of the overlap, a registrant would be required to report this effect. This information could help investors better understand the true extent of a registrant's disclosed Scope 3 emissions and, thus, the climate-related risks faced by the registrant.

Finally, a proposed provision would provide that a registrant may present its estimated Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions.[541] This proposed provision reflects our understanding that, because a registrant may encounter more difficulties obtaining all of the data required for determining its Scope 3 emissions compared to determining its Scopes 1 and 2 emissions, presenting its Scope 3 emissions in terms of a range may be a reasonable means of estimating these emissions when faced with such gaps in the data.

Request for Comment

115. Should we require a registrant to disclose the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions metrics, as proposed? Should we require a registrant to use a particular methodology for determining its GHG emission metrics? If so, should the required methodology be pursuant to the GHG Protocol's Corporate Accounting and Reporting Standard and related standards and guidance? Is there another methodology that we should require a registrant to follow when determining its GHG emissions? Should we base our climate disclosure rules on certain concepts developed by the GHG Protocol without

[541] *See* proposed 17 CFR 229.1504(e)(4)(ii).

requiring a registrant to follow the GHG Protocol in all respects, as proposed? Would this provide flexibility for registrants to choose certain methods and approaches in connection with GHG emissions determination that meet the particular circumstances of their industry or business or that emerge along with developments in GHG emissions methodology as long as they are transparent about the methods and underlying assumptions used? Are there adjustments that should be made to the proposed methodology disclosure requirements that would provide flexibility for registrants while providing sufficient comparability for investors?

116. Should we require a registrant to disclose the organizational boundaries used to calculate its GHG emissions, as proposed? Should we require a registrant to determine its organizational boundaries using the same scope of entities, operations, assets, and other holdings within its business organization as that used in its consolidated financial statements, as proposed? Would prescribing this method of determining organizational boundaries avoid potential investor confusion about the reporting scope used in determining a registrant's GHG emissions and the reporting scope used for the financial statement metrics, which are included in the financial statements? Would prescribing this method of determining organizational boundaries result in more robust guidance for registrants and enhanced comparability for investors? If, as proposed, the organizational boundaries must be consistent with the scope of the registrant's consolidated financial statements, would requiring separate disclosure of the organizational boundaries be redundant or otherwise unnecessary?

117. Except for calculating Scope 3 emissions, the proposed rules would not require a registrant to disclose the emissions from investments that are not consolidated, proportionately consolidated, or that do not qualify for the equity method of accounting. Should we require such disclosures for Scopes 1 and 2 emissions, and if so, how?

118. Could situations arise where it is impracticable for a registrant to align the scope of its organizational boundaries for GHG emission data with the scope of the consolidation for the rest of its financial statements? If so, should we allow a registrant to take a different approach to determining the organizational boundaries of its GHG emissions and provide related disclosure, including an estimation of the resulting difference in emissions disclosure (in addition to disclosure about methodology and other matters that would be required by the proposed GHG emissions disclosure rules)?

119. Alternatively, should we require registrants to use the organizational boundary approaches recommended by the GHG Protocol (*e.g.*, financial control, operational control, or equity share)? Do those approaches provide a clear enough framework for complying with the proposed rules? Would such an approach cause confusion when analyzing information in the context of the consolidated financial statements or diminish comparability? If we permit a registrant to choose one of the three organizational boundary approaches recommended by the GHG Protocol, should we require a reconciliation with the scope of the rest of the registrant's financial reporting to make the disclosure more comparable?

120. Should we require a registrant to disclose its operational boundaries, as proposed? Should we require a registrant to discuss its approach towards the categorization of emissions (*e.g.*, as direct or indirect emissions) and emissions sources (*e.g.*, stationary or mobile) when describing its operational boundaries, as proposed?

121. The proposed operational boundaries disclosure is based largely on concepts developed by the GHG Protocol. Would requiring a registrant to determine its organizational boundaries pursuant to the GAAP applicable to the financial statement metrics included in the financial statements but its operational boundaries largely pursuant to concepts developed by the GHG

Protocol cause confusion? Should we require a registrant to apply the GAAP applicable to its financial statements when determining whether it "controls" a particular source pursuant to the definition of Scope 1 emissions, or particular operations pursuant to the definition of Scope 2 emissions, as proposed? If not, how should "control" be determined and would applying a definition of control that differs from applicable GAAP result in confusion for investors?

122. Should we require a registrant to use the same organizational boundaries when calculating its Scopes 1 and 2 emissions, as proposed? Are there any circumstances when a registrant's organizational boundaries for determining its Scope 2 emissions should differ from those required for determining its Scope 1 emissions? Should we also require a registrant to apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control and which must be included in the calculation of its Scope 3 emissions, as proposed? Are there any circumstances where using a different organizational boundary for purposes of Scope 3 emissions disclosure would be appropriate?

123. Should we require a registrant to be consistent in its use of its organizational and operational boundaries once it has set those boundaries, as proposed? Would the proposed requirement help investors to track and compare the registrant's GHG emissions over time?

124. Should we require a registrant to disclose the methodology for calculating the GHG emissions, including any emission factors used and the source of the emission factors, as proposed? Should we require a registrant to use a particular set of emission factors, such as those provided by the EPA or the GHG Protocol?

125. Should we permit a registrant to use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the

estimates, as proposed? Should we permit the use of estimates for only certain GHG emissions, such as Scope 3 emissions? Should we permit a registrant to use a reasonable estimate of its GHG emissions for its fourth fiscal quarter if no actual reported data is reasonably available, together with actual, determined GHG emissions data for its first three fiscal quarters when disclosing its GHG emissions for its most recently completed fiscal year, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter, as proposed? If so, should we require a registrant to report any such material difference in its next Form 10-Q if domestic, or in a Form 6-K, if a foreign private issuer? Should we permit a domestic registrant to report any such material difference in a Form 8-K if such form is filed (rather than furnished) with the Commission? Should any such reasonable estimate be subject to conditions to help ensure accuracy and comparability? If so, what conditions should apply?

126. Should we require a registrant to disclose, to the extent material, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions, as proposed? Should we require the disclosure of the use of third-party data only for certain GHG emissions, such as Scope 3 emissions? Should we require the disclosure of the use of third-party data for Scope 3 emissions, regardless of its materiality to the determination of those emissions? If a registrant discloses the use of third-party data, should it also be required to identify the source of such data and the process the registrant undertook to obtain and assess the data, as proposed?

127. Should we require a registrant to disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous year, as proposed? If so, should we require a registrant to restate its GHG emissions data for the previous year, or for

the number of years for which GHG emissions data has been provided in the filing, using the changed methodology or assumptions? If a registrant's organizational or operational boundaries, in addition to methodology or assumptions, change, to what extent should we require such disclosures of the material change, restatements or reconciliations? In these cases, should we require a registrant to apply certain accounting standards or principles, such as FASB ASC Topic 250, as guidance regarding when retrospective disclosure should be required?

128. Should we require a registrant to disclose, to the extent material, any gaps in the data required to calculate its GHG emissions, as proposed? Should we require the disclosure of data gaps only for certain GHG emissions, such as Scope 3 emissions? If a registrant discloses any data gaps encountered when calculating its Scope 3 emissions or other type of GHG emissions, should it be required to discuss whether it used proxy data or another method to address such gaps, and how its management of any data gaps has affected the accuracy or completeness of its GHG emissions disclosure, as proposed? Are there other disclosure requirements or conditions we should adopt to help investors obtain a reasonably complete understanding of a registrant's exposure to the GHG emissions sourced by each scope of emissions?

129. When determining the materiality of its Scope 3 emissions, or when disclosing those emissions, should a registrant be required to include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing, in addition to emissions from activities in its value chain, as proposed? Would this requirement help ensure that investors receive a complete picture of a registrant's carbon footprint by precluding the registrant from excluding emissions from activities that are typically conducted as part of operations over which it has ownership or control but that are outsourced in order to reduce its Scopes 1 or 2 emissions? Should a

requirement to include outsourced activities be subject to certain conditions or exceptions and, if so, what conditions or exceptions?

130. Should we require a registrant that must disclose its Scope 3 emissions to discuss whether there was any significant overlap in the categories of activities that produced the Scope 3 emissions? If so, should a registrant be required to describe any overlap, how it accounted for the overlap, and its effect on the total Scope 3 emissions, as proposed? Would this requirement help investors assess the accuracy and reliability of the Scope 3 emissions disclosure?

131. Should we permit a registrant to present its Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions, as proposed? Should we place limits or other parameters regarding the use of a range and, if so, what should those limits or parameters be? For example, should we require a range to be no larger than a certain size? What other conditions or guidance should we provide to help ensure that a range, if used, is not overly broad and is otherwise reasonable?

132. Should we require a registrant to follow a certain set of published standards for calculating Scope 3 emissions that have been developed for a registrant's industry or that are otherwise broadly accepted? For example, should we require a registrant in the financial industry to follow PCAF's Global GHG Accounting & Reporting Standard for the Financial Industry when calculating its financed emissions within the "Investments" category of Scope 3 emissions? Are there other industry-specific standards that we should require for Scope 3 emissions disclosure? Should we require a registrant to follow the GHG Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard if an industry-specific standard is not available for Scope 3 emissions disclosure? If we should require the use of a third-party standard

for Scope 3 emissions reporting, or any other scope of emissions, how should we implement this requirement?

3. The Scope 3 Emissions Disclosure Safe Harbor and Other Accommodations

We recognize that the calculation and disclosure of Scope 3 emissions may pose difficulties compared to Scopes 1 and 2 emissions, which has caused concern for some commenters.[542] It may be difficult to obtain activity data from suppliers and other third parties in a registrant's value chain, or to verify the accuracy of that information. It may also be necessary to rely heavily on estimates and assumptions to generate Scope 3 emissions data. For example, registrants may need to rely on assumptions about how customers will use their products in order to calculate Scope 3 emissions from the use of sold products.

Depending on the size and complexity of a company and its value chain, the task of calculating Scope 3 emissions could be challenging.[543] We expect that some of these challenges may recede over time. For example, as more companies make their Scope 1 and 2 emissions data publicly available, these data can serve as the input for other companies' Scope 3 calculations. In addition, large companies that are voluntarily disclosing Scope 3 emissions information currently are also working with suppliers to increase access to emissions data and

542 *See, e.g.*, letter from Dimensional Fund Advisors; *see also supra* note 422.

543 While there may be less challenging approaches, such as using industry averages or proxies for activity data (such as economic data), the result may be less accurate and could obscure the impact of choices that companies may make to reduce their Scope 3 emissions. For example, if a company uses industry averages to calculate Scope 3 emissions from shipping its products, it may have difficulty communicating to investors how its selection of a shipping company that runs on lower emissions fuel or picks more efficient routes has lowered its Scope 3 emissions.

improve its reliability,[544] which could have positive spillover effects for other companies that use the same suppliers. Furthermore, within certain industries, there is work underway to improve methodologies and share best practices to make Scope 3 calculations less burdensome and more reliable.[545] Notwithstanding these anticipated developments, calculating and disclosing Scope 3 emissions could represent a challenge for certain registrants, in particular those that do not currently report such information on a voluntary basis.

To balance concerns about reporting Scope 3 emissions with the need for decision-useful emissions disclosure, we are proposing the following accommodations for Scope 3 emissions disclosure:

- A safe harbor for Scope 3 emissions disclosure from certain forms of liability under the Federal securities laws;[546]

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[544] *See, e.g.*, Apple, *Environmental Social Governance Report* (2021), available at https://s2.q4cdn.com/470004039/files/doc_downloads/2021/08/2021_Apple_ESG_Report.pdf (stating that Apple works with its suppliers to help address Apple's environmental commitments, such as becoming carbon neutral by 2030 across its entire product footprint).

[545] *See, e.g.*, PCAF, *The Global GHG Accounting and Reporting Standard for the Financial Industry*. In addition, the American Petroleum Institute has developed an overview of Scope 3 methodologies to inform oil and gas companies about Scope 3 estimation approaches. *See* API and IPIECA, *Estimating petroleum industry value chain (Scope 3) greenhouse gas emissions*, available at https://www.api.org/~/media/Files/EHS/climate-change/Scope-3-emissions-reporting-guidance-2016.pdf. Finally, an initiative launched by food and beverage companies, Danone and Mars, together with the Science Based Targets Initiative, aims to provide Scope 3 guidance to companies in difference industries, starting with the food and beverage industry. *See* SB, *Serious About Scope 3: Pioneering Companies Embracing Complexity, Reaping the Benefits*, available at https://sustainablebrands.com/read/supply-chain/serious-about-scope-3-pioneering-companies-embracing-complexity-reaping-the-benefits.

[546] *See* 17 CFR 229.1504(f).

- An exemption for smaller reporting companies ("SRCs") from the Scope 3 emissions disclosure provision;[547] and
- A delayed compliance date for Scope 3 emissions disclosure.[548]

We are proposing a safe harbor for Scope 3 emissions disclosure to alleviate concerns that registrants may have about liability for information that would be derived largely from third parties in a registrant's value chain. Many commenters recommended that the Commission adopt a safe harbor for climate-related disclosures.[549] These commenters asserted that a safe harbor would encourage registrants to provide meaningful, quantitative metrics and analysis. Other commenters focused their recommendation for a safe harbor on certain types of climate-related disclosures, such as those pertaining to scenario analysis, third-party derived data (such as Scope 3 emissions),[550] or forward-looking statements generally.[551] With respect to Scope 3 emissions specifically, commenters recommended that the Commission provide a safe harbor

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[547] *See* proposed 17 CFR 229.1504(c)(3).

[548] *See infra* Section II.M.

[549] *See, e.g.*, letters from ACCO Brands Corp.; American Bankers Association; American Petroleum Institute; American Property Casualty Insurance Association; Associated General Contractors of America; Bank of America Corporation; Biotechnology Innovation Organization; ConocoPhillips; Delta Airlines, Inc. (June 16, 2021); Deutsches Bank AG; Dow; Enbridge Inc.; Energy Infrastructure Council; Etsy, Inc.; Freeport-McMoran; KPMG LLP; Managed Funds Association; Nacco Industries; National Investor Relations Institute; National Ocean Industries Association; Neuberger Berman; NIRI Los Angeles; Oshkosh Corporation; Salesforce.com; SASB; SIFMA (June 10, 2021); Society for Corporate Governance; United Airlines Holdings, Inc. (June 11, 2021); and Wachtell Rosen Lipton & Katz.

[550] *See, e.g.*, letters from Business Council for Sustainable Energy; Dimensional Fund Advisors; and Independent Community Bankers of America.

[551] *See, e.g.*, letters from AICPA; BlackRock; Center for Climate and Energy Solutions; Crowe LLP; Energy Strategy Coalition; Institute of Management Accountants; Japanese Bankers Association; Nareit; National Mining Association; and Newmont Corporation.

due to the reliance on estimates and data needed for Scope 3 emissions reporting that are outside of the registrant's control.[552]

While we are not proposing a broad safe harbor for all climate-related disclosures, many of which are similar to other business and financial information required by Commission rules, we are proposing a targeted safe harbor for Scope 3 emissions data in light of the unique challenges associated with this information. The proposed safe harbor would provide that disclosure of Scope 3 emissions by or on behalf of the registrant would be deemed not to be a fraudulent statement unless it is shown that such statement was made or reaffirmed without a reasonable basis or was disclosed other than in good faith.[553] The safe harbor would extend to any statement regarding Scope 3 emissions that is disclosed pursuant to proposed subpart 1500 of Regulation S-K and made in a document filed with the Commission.[554] For purposes of the proposed safe harbor, the term "fraudulent statement" would be defined to mean a statement that is an untrue statement of material fact, a statement false or misleading with respect to any material fact, an omission to state a material fact necessary to make a statement not misleading, or that constitutes the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business, or an artifice to defraud as those terms are used in the Securities Act or the Exchange Act or the rules or regulations promulgated thereunder.[555] The proposed safe harbor is intended to mitigate potential liability concerns associated with providing emissions disclosure based on third-party information by

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552 *See, e.g.*, letters from Dimensional Fund Advisors; and International Capital Markets Association (June 15, 2021).

553 *See* proposed 17 CFR 229.1504(f)(1).

554 *See* proposed 17 CFR 229.1504(f)(2).

555 *See* proposed 17 CFR 229.1504(f)(3). This definition is based on the definition of fraudulent statement in 17 CFR 230.175.

making clear that registrants would only be liable for such disclosure if it was made without a reasonable basis or was disclosed other than in good faith. It also may encourage more robust Scope 3 emissions information, to the extent registrants feel reassured about relying on actual third-party data as opposed to national or industry averages for their emissions estimates.

Several commenters expressed concern that the Commission would impose a "one size fits all" approach, which could disproportionately impact smaller registrants, when adopting climate-related disclosure rules.[556] Several commenters recommended that the Commission phase-in or scale down the climate-related disclosure requirements for smaller registrants.[557]

Although we are not proposing to exempt SRCs from the full scope of the proposed climate-related disclosure rules, we are proposing to exempt SRCs from the proposed Scope 3 emissions disclosure requirement.[558] We believe that exempting SRCs from the proposed Scope 3 emissions disclosure requirement would be appropriate in light of the proportionately higher costs they could incur, compared to non-SRCs, to engage in the data gathering, verification, and other actions associated with Scope 3 emissions reporting, many of which may have fixed cost components.

To further ease the burden of complying with the proposed Scope 3 disclosure requirement, we are also proposing a delayed compliance date for this requirement. As

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[556] *See, e.g.*, letters from Elisha Doerr (May 24, 2021); Freedomworks Foundation (June 14, 2021); Roger Hawkins (May 24, 2021); and Jonathan Skee (May 26, 2021).

[557] *See, e.g.,* letters from American Bankers Association (June 11, 2021); Biotechnology Innovation Organization (June 15, 2021); BNP Paribas; Cardano Risk Management Ltd.; Catavento Consultancy; Chamber of Commerce (June 11, 2021); Credit Roundtable (June 11, 2021); Douglas Hileman Consulting; Environmental Bankers Association (June 9, 2021); Grant Thornton; Virginia Harper Ho; Manulife Investment Management; Mirova US; Morrison & Foerster; NEI Investments (June 11, 2021); New York State Society of Certified Public Accountants; PIMCO; and SIFMA.

[558] *See* proposed 17 CFR 229.1504(c)(3). We also are proposing a later compliance date for SRCs. *See infra* Section II.M.

explained in greater detail below, all registrants, regardless of their size, would have an additional year to comply initially with the Scope 3 disclosure requirement beyond the compliance date for the other proposed rules. Moreover, because a registrant's Scope 3 emissions consist of the Scopes 1 and 2 emissions of its suppliers, distributors, and other third parties in the registrant's value chain, to the extent those parties become subject to the proposed rules, the increased availability of Scopes 1 and 2 emissions data following the rules' effectiveness should help ease the burden of complying with the Scope 3 emissions disclosure requirement.

Finally, we note that Securities Act Rule 409 and Exchange Act Rule 12b-21, which provide accommodations for information that is unknown and not reasonably available, would be available for the proposed Scope 3 emissions disclosures.[559] These rules allow for the conditional omission of required information when such information is unknown and not reasonably available to the registrant, either because obtaining the information would involve unreasonable effort or expense, or because the information rests peculiarly within the knowledge of another person not affiliated with the registrant.[560]

Request for Comment

133. Should we provide a safe harbor for Scope 3 emissions disclosure, as proposed? Is the scope of the proposed safe harbor clear and appropriate? For example, should the safe harbor apply to any registrant that provides Scope 3 disclosure pursuant to the proposed rules, as proposed? Should we limit the use of the safe harbor to certain classes of registrants or to

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[559] *See* 17 CFR 230.409 and 17 CFR 240.12b-21.

[560] *See id*. We expect, however, that a registrant that requires emissions data from another registrant in its value chain would be able to obtain that data without unreasonable effort or expense because of the increased availability of Scopes 1 and 2 emissions data for registrants following the effectiveness of the proposed rules.

registrants meeting certain conditions and, if so, which classes or conditions? For example, should we require the use of a particular methodology for calculating and reporting Scope 3 emissions, such as the PCAF Standard if the registrant is a financial institution, or the GHG Protocol Scope 3 Accounting and Reporting Standard for other types of registrants? Should we clarify the scope of persons covered by the language "by or on behalf of a registrant" by including language about outside reviewers retained by the registrant or others? Should we define a "fraudulent statement," as proposed? Is the level of diligence required for the proposed safe harbor (*i.e.*, that the statement was made or reaffirmed with a reasonable basis and disclosed in good faith) the appropriate standard? Should the safe harbor apply to other climate-related disclosures, such as Scopes 1 and 2 emissions disclosures, any targets and goals disclosures in response to proposed Item 1505 (discussed below), or the financial statement metrics disclosures required pursuant to Proposed Article 14 of Regulation S-X? Should the safe harbor apply indefinitely, or should we include a sunset provision that would eliminate the safe harbor some number of years, (*e.g.*, five years) after the effective date or applicable compliance date of the rules? Should the safe harbor sunset after certain conditions are satisfied? If so, what types of conditions should we consider? What other approaches should we consider?

134. Should we provide an exemption from Scope 3 emissions disclosure for SRCs, as proposed? Should the exemption not apply to a SRC that has set a target or goal or otherwise made a commitment to reduce its Scope 3 emissions? Are there other classes of registrants we should exempt from the Scope 3 emissions disclosure requirement? For example, should we exempt EGCs, foreign private issuers, or a registrant that is filing or has filed a registration statement for its initial public offering during its most recently completed fiscal year from the

Scope 3 disclosure requirement? Instead of an exemption, should we provide a longer phase in for the Scope 3 disclosure requirements for SRCs than for other registrants?

H. Attestation of Scope 1 and Scope 2 Emissions Disclosure

1. Overview

The proposed rules would require a registrant, including a foreign private issuer, that is an accelerated filer or large accelerated filer to include in the relevant filing an attestation report covering the disclosure of its Scope 1 and Scope 2 emissions[561] and to provide certain related disclosures about the service provider.[562] As proposed, the attestation engagement must, at a minimum, be at the following assurance level for the indicated fiscal year for the required GHG emissions disclosure:[563]

Limited Assurance	Reasonable Assurance
Fiscal Years 2 and 3 after Scopes 1 and 2 emissions disclosure compliance date	Fiscal Years 4 and beyond after Scopes 1 and 2 emissions disclosure compliance date

To provide additional clarity, the following table illustrates the application of the transition periods assuming that the proposed rules will be adopted with an effective date in December 2022 and that the accelerated filer or large accelerated filer has a December 31st fiscal year-end:

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561 *See* proposed 17 CFR 229.1505(a). In order to attest to the Scopes 1 and 2 emissions disclosure, we believe a GHG emissions attestation provider would need to include in its evaluation relevant contextual information. In particular, the attestation provider would be required to evaluate the registrant's compliance with (i) proposed Item 1504(a), which includes presentation requirements (*e.g.,* disaggregation by each constituent greenhouse gas), (ii) the calculation instructions included in proposed Item 1504(b), and (iii) the disclosure requirements in proposed Item 1504(e) regarding methodology, organizational boundary, and operational boundary. *See infra* Section II.H.3 for further discussion of the criteria against which the Scopes 1 and 2 emissions disclosure are measured or evaluated.

562 *See* proposed 17 CFR 229.1505(d).

563 *See* proposed 17 CFR 229.1505(a)(1).

Filer Type	Scopes 1 and 2 GHG Disclosure Compliance Date*	Limited Assurance	Reasonable Assurance
Accelerated Filer	Fiscal year 2024 (filed in 2025)	Fiscal year 2025 (filed in 2026)	Fiscal year 2027 (filed in 2028)
Large Accelerated Filer	Fiscal year 2023 (filed in 2024)	Fiscal year 2024 (filed in 2025)	Fiscal year 2026 (filed in 2027)

[*] *See infra* Section II.M for a discussion of the proposed disclosure compliance dates for Scopes 1 and 2 GHG emissions disclosure. If the accelerated filer or the large accelerated filer has a non-calendar-year fiscal year-end date that results in its 2024 or 2023 fiscal year, respectively, commencing before the compliance dates of the rules, it would not be required to comply with proposed GHG emissions disclosure requirements until the following fiscal year (as discussed below in Section II.M). Accordingly, for such filers, the time period for compliance with the corresponding attestation requirements under proposed Item 1505 would be one year later than illustrated above.

During the transition period when limited assurance is required, the proposed rules would permit an accelerated filer or a large accelerated filer, at its option, to obtain reasonable assurance of its Scope 1 and 2 emissions disclosure.[564] For example, an accelerated filer or a large accelerated filer may choose to obtain reasonable assurance such that its GHG emissions disclosure receives the same level of assurance as its financial statements.[565]

At its option, an accelerated filer or a large accelerated filer would be able to obtain any level of assurance over its climate-related disclosures that are not required to be assured pursuant

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[564] Reasonable assurance is equivalent to the level of assurance provided in an audit of a registrant's consolidated financial statements included in a Form 10-K. Limited assurance is equivalent to the level of assurance (commonly referred to as a "review") provided over a registrant's interim financial statements included in a Form 10-Q.

[565] We refer to "assurance" broadly when describing the level and scope of assurance to which climate-related disclosures should be subject. Our proposed approach to assurance has been guided by "attestation" standards published by organizations including the PCAOB, AICPA, and the International Auditing and Assurance Standards Board ("IAASB"). Such attestation standards apply to engagements other than audit and review of historical financial statements and have been widely used in the current voluntary ESG and GHG assurance market for a number of years.

to proposed Item 1505(a). For example, an accelerated filer or a large accelerated filer could voluntarily include an attestation report at the limited assurance level for its GHG intensity metrics or its Scope 3 emissions disclosure. To avoid potential confusion, however, the voluntary assurance obtained by such filer would be required to follow the requirements of proposed Item 1505(b)–(d), including using the same attestation standard as the required assurance over Scope 1 and Scope 2.[566] For filings made by accelerated filers and large accelerated filers after the compliance date for the GHG emissions disclosure requirements but before proposed Item 1505(a) requires limited assurance, the filer would only be required to provide the disclosure called for by proposed Item 1505(e). As discussed below in Section II.H.5, a registrant that is not an accelerated filer or a large accelerated filer that obtains voluntary assurance would be required to comply only with proposed Item 1505(e).

Many commenters recommended that we require climate-related disclosures to be subject to some level of assurance to enhance the reliability of the disclosures.[567] Commenters noted

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[566] *See* proposed 17 CFR 229.1505(a)(2). If the accelerated filer or large accelerated filer was required to obtain reasonable assurance over its Scope 1 and Scope 2 emissions disclosures and the attestation provider chose to follow, for example, the AICPA attestation standards, the accelerated filer or large accelerated filer could voluntarily obtain limited assurance over its GHG intensity metric or Scope 3 emissions disclosures, and the attestation provider would be required to follow the AICPA's attestation standard for providing limited assurance.

[567] *See, e.g.*, letters from AICPA; Americans for Financial Reform Education Fund *et al*; Andrew Behar; Baillie Gifford; Carbon Tracker Initiative; Cardano Risk Management Ltd.; CDP; Center for American Progress; Center for Audit Quality; Ceres et al.; Climate Disclosure Standards Board; Climate Governance Initiative; Emmanuelle Haack; Eni SpA; ERM CVS (recommending limited assurance); George Serafeim; Regenerative Crisis Response Committee; Friends of the Earth, Amazon Watch, and Rainforest Action Network; Hermes Equity Ownership Limited; Impax Asset Management; Institutional Shareholder Services; Interfaith Center on Corporate Responsibility (recommending reasonable assurance); International Corporate Governance Institute; International Organization for Standardization; Morningstar, Inc.; Natural Resources Defense Council; NY City Comptroller; NY State Comptroller; Oxfam America; PRI ; Pricewaterhouse Coopers; Revolving Door Project;

that companies are increasingly seeking some type of third-party assurance or verification over ESG and climate-related disclosures. For example, according to one commenter, 80 percent of S&P 100 companies currently subject certain items of their ESG information, including climate-related disclosures such as greenhouse gas emissions, to some type of third-party assurance or verification.[568] Several commenters recommended that we require climate-related disclosures to be subject to limited assurance,[569] which provides a lower level of assurance than reasonable assurance, but is less costly, and is the most common form of assurance provided for ESG, including climate-related disclosures, in the current voluntary reporting landscape.[570]

One commenter recommended that, at a minimum, we require a registrant to obtain a limited assurance report for its Scopes 1 and 2 emissions disclosure while encouraging optional verification for other ESG metrics.[571] Another commenter indicated that a limited assurance requirement for climate-related disclosures would be similar to the EU's Corporate Sustainability Reporting Directive proposal that, if adopted, would initially require companies in the European Union to obtain limited assurance on reported sustainability information with an option to move towards reasonable assurance in the future.[572] One commenter stated the view that, while the

TotalEnergies (recommending limited assurance); Value Balancing Alliance; WBCSD; William and Flora Hewlett Foundation; and World Benchmarking Alliance.

568 *See* letter from CAQ; *see also* CAQ, *S&P 500 and ESG Reporting* (Aug. 9, 2021), available at https://www.thecaq.org/sp-500-and-esg-reporting/ (stating that more than half of S&P 500 companies had some form of assurance or verification over ESG metrics, including GHG emissions metrics).

569 *See, e.g.*, letters from Credit Suisse; ERM CVS; PayPal Holdings, Inc.; TotalEnergies; and Walmart.

570 *See* letter from Energy Infrastructure Council; *see also* CAQ, *S&P 500 and ESG Reporting* (Aug. 9, 2021).

571 *See* letter from PayPal Holdings, Inc.

572 *See* letter from CAQ.

professional capacity of audit firms might, at this point, be insufficient to provide reasonable assurance of ESG data, it supported a mandatory limited assurance requirement for climate risk reporting.[573] Other commenters recommended that we require climate-related disclosures to be audited at the reasonable assurance level.[574]

Some commenters, however, opposed any third-party assurance requirement for climate-related disclosures because of the significant cost that these commenters asserted it could impose on public companies, and because, in their view, application of assurance standards to data that is different from traditional financial reporting disclosures, such as GHG emissions, would be a relatively new and evolving field.[575] Some of these commenters indicated that, as a first step, registrants should develop their internal controls and disclosure controls and procedures ("DCP") to include climate-related disclosures, and defer mandated third-party assurance requirements to a later time.[576]

We recognize that requiring GHG emissions disclosure in Commission filings should enhance the consistency, comparability, and reliability of such disclosures due to the application of DCP and the proposed inclusion of certain prescriptive elements that may help improve standardization of GHG emissions calculations. Nevertheless, the evolving and unique nature of GHG emissions reporting involves and, in some cases, warrants varying methodologies, differing assumptions, and a substantial amount of estimation. Certain aspects of GHG emissions

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573 *See* letter from Credit Suisse.

574 *See, e.g.*, letters from Ceres *et al*.; and Interfaith Center on Corporate Responsibility.

575 *See, e.g.*, letters from American Petroleum Institute; Investment Company Institute; and National Association of Manufacturers.

576 *See, e.g.*, letters from American Petroleum Institute; and Investment Company Institute. We agree that registrants should develop their DCP to include their GHG emissions disclosures. When the proposed GHG emissions disclosures are included in Form 10-K and Form 20-F annual reports, our rules governing DCP would apply to those disclosures. *See* 17 CFR 240.13a-15 and 240.15d-15.

disclosure also involve reliance on third-party data. As such, requiring a third party's attestation over these disclosures would provide investors with an additional degree of reliability regarding not only the figures that are disclosed, but also the key assumptions, methodologies, and data sources the registrant used to arrive at those figures. In other contexts, such as mineral resources and oil and gas reserves, the Commission has recognized the value that third parties with specialized expertise in audit and engineering can bring to company disclosures of physical resources or risks.[577]

Our rules typically do not require registrants to obtain assurance over disclosure provided outside of the financial statements, including quantitative disclosure. We believe, however, that there are important distinctions between existing quantitative disclosure required to be provided outside of the financial statements and the proposed GHG emissions disclosure. In contrast to GHG emissions disclosure, quantitative disclosure outside of the financial statements typically is derived, at least in part, from the same books and records that are used to generate a registrant's audited financial statements and accompanying notes and that are subject to ICFR. Accordingly, such quantitative disclosure has been subject to audit procedures as part of the audit of the financial statements in the same filing. Further, the auditor's read and consider obligation requires an evaluation of this quantitative information based on the information obtained through

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[577] *See* 17 CFR 229.1302 (requiring a registrant's disclosure of exploration results, mineral resources, or mineral reserves to be based on and accurately reflect information and supporting documentation prepared by a qualified person, which, pursuant to 17 CFR 229.1300, is defined to mean a mineral industry professional with at least five years of relevant experience in the type of mineralization and type of deposit under consideration who meets certain additional criteria); and 17 CFR 229.1202(a)(7) (requiring a registrant to disclose the qualifications of the technical person primarily responsible for overseeing the preparation of the oil and gas reserves estimates or reserves audit).

the audit of the financial statements.[578] Unlike other quantitative information that is provided outside of the financial statements, GHG emissions disclosure would generally not be developed from information that is included in the registrant's books and records and, therefore, would not be subjected to audit procedures.[579] In addition, although not an assurance engagement, we have adopted rules requiring an expert to review and provide conclusions on other specialized, quantitative data that is provided outside of the financial statements.[580] Accordingly, to enhance its reliability, we believe it is appropriate to require that GHG emissions disclosure be subject to third-party attestation.

For similar reasons, we also considered proposing to require that management assess and disclose the effectiveness of controls over GHG emissions disclosure (apart from the existing requirements with respect to the assessment and effectiveness of DCP). More specifically, in addition to the requirement to assess such controls, we considered whether to require management to include a statement in their annual report regarding their responsibility for the design and evaluation of controls over GHG emissions disclosures, as well as to disclose their conclusion regarding the effectiveness of such controls. We also considered proposing to require

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578 *See* PCAOB AS 2710 *Other Information in Documents Containing Audited Financial Statements* (requiring an auditor to read the other information (included in an annual report with the audited financial statements) and consider whether such information, or the manner of its presentation, is materially inconsistent with information, or the manner of its presentation, appearing in the financial statements). For example, disclosure pursuant to 17 CFR 229.303 (Item 303 of Regulation S-K – MD&A) is derived in part from the same books and records that are subject to ICFR and used to generate a registrant's audited financial statements and accompanying notes (*e.g.*, the liquidity and capital resources disclosures are anchored to the audited cash flows information disclosed in the financial statements).

579 Although GHG emission disclosure would generally not be directly derived from the same books and records that are used to generate a registrant's audited financial statements and accompanying notes and that are subject to ICFR , GHG emission disclosure, as proposed, would be required to use the same organizational and operational boundaries as the registrant's financial statement disclosures. *See* proposed 17 CFR 229.1504(e)(2).

580 *See Modernization of Property Disclosures for Mining Registrants,* Release No. 33-10570 (Oct. 31, 2018), [83 FR 66344 (Dec. 26, 2018)].

a GHG emissions attestation provider's attestation of the effectiveness of controls over GHG emissions disclosure in addition to the proposed attestation over the Scopes 1 and 2 GHG emissions disclosure. Although both such requirements could further enhance the reliability of the related Scopes 1 and 2 GHG emissions disclosure, we are not currently proposing them at this time. We are, however, continuing to consider these alternatives, including: (i) the need to develop guidance for management on conducting such an assessment and (ii) whether appropriate attestation standards exist. Accordingly, we request comment on these and related issues below.

The Commission has long recognized the important role played by an independent audit in contributing to the reliability of financial reporting.[581] Relatedly, studies suggest that investors have greater confidence in information that has been assured, particularly when it is assured at the reasonable assurance level.[582] Although a limited assurance engagement provides a lower level of assurance than a reasonable assurance engagement,[583] studies of ESG-related assurance, which is typically provided at a limited assurance level, have found benefits such as

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[581] *See Qualifications of Accountants*, Release No. 33-10876 (Oct. 16, 2020) [85 FR 80508 (Dec. 11, 2020)], at 80508. *See also* Statement of Paul Munter, Acting Chief Accountant, *The Importance of High Quality Independent Audits and Effective Audit Committee Oversight to High Quality Financial Reporting to Investors* (Oct. 26, 2021), available at https://www.sec.gov/news/statement/munter-audit-2021-10-26.

[582] *See, e.g.*, Carol Callaway Dee, et al., *Client Stock Market Reaction to PCAOB Sanctions against a Big Four Auditor*, 28 CONTEMP. ACCT. RES. 263 (Spring 2011) ("Audits are valued by investors because they assure the reliability of and reduce the uncertainty associated with financial statements."); Center for Audit Quality, *2019 Main Street Investor Survey* ("[I]nvestors continue to register high degrees of confidence in the ability of public company auditors to fulfill their investor-protection roles. Eighty-three percent of US retail investors view auditors as effective in their investor-protection role within the US capital markets, up from 81% in 2018); and CFA Institute, *CFA Institute Member Survey Report – Audit Value, Quality, and Priorities* (2018).

[583] *See infra* note 604 for a discussion of the key differences between limited and reasonable assurance engagements.

credibility enhancement, lower cost of equity capital, and lower analyst forecast errors and dispersion.[584] Therefore, proposing to require Scope 1 and Scope 2 emissions disclosure by accelerated filers and large accelerated filers be subject to limited assurance initially, with an eventual scaling up to reasonable assurance, could potentially improve both the actual reliability of disclosure and investor confidence in such disclosure.[585]

Increasing investor demand for consistent, comparable, and reliable climate-related financial information appears to have led a growing number of companies to voluntarily obtain third-party assurance over their climate-related disclosures both within the U.S. and globally. For example, according to one study, 53% of the S&P 500 companies had some form of assurance or verification over climate-related metrics, along with other metrics.[586] Another survey of sustainability reporting trends from 5,200 companies across 52 countries (including the United States) stated that, of the top 100 companies (by revenue), 80% have reporting on ESG (including climate), with up to 61% of those companies also obtaining assurance.[587] The

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584 *See, e.g.,* Ryan J. Casey, et al., *Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States,* 34 AUDITING: A JOURNAL OF PRACTICE AND THEORY 97, 122 (Feb. 2015) (finding that corporate social responsibility ("CSR") assurance results in lower cost-of-capital along with lower analyst forecast errors and dispersion, and that financial analysts find related CSR reports to be more credible when independently assured). *See also infra* note 592 for statistics illustrating that limited assurance is more commonly obtained voluntarily in the current market than reasonable assurance over ESG-related information.

585 *See, e.g.,* letter from Institute for Policy Integrity, Environmental Defense Fund, Initiative on Climate Risk & Resilience Law ("Voluntary frameworks typically lack independent auditing requirements, which is one reason many investors perceive current disclosures to be unreliable or uneven."). *See also* EVORA Global and SIERA, *Investor Survey 2021: Part 2 ESG Data Challenge* (2021), 7, available at https://evoraglobal.com/wp-content/uploads/2021/12/ESG-Data-Challenge-Investor-Survey-Part-2.pdf ("Investors are integrating ESG across the investment lifecycle, for the purposes of strategy, reporting, peer benchmarking, etc., however the majority (86%) are not sure of their ESG data quality. About 52% of the investors consider that their ESG data is partially investment-grade."); State Street Global Advisors, *The ESG Data Challenge* (Mar. 2019), available at https://www.ssga.com/investment-topics/environmental-social-governance/2019/03/esg-data-challenge.pdf.

586 *See* CAQ, *S&P 500 and ESG Reporting* (Aug. 9, 2021).

587 *See* KPMG, *The KPMG Survey of Sustainability Reporting 2020*, available at https://home.kpmg/xx/en/home/insights/2020/11/the-time-has-come-survey-of-sustainability-reporting.html.

prevalence of major companies obtaining assurance in connection with their voluntary sustainability reports suggests that both the companies and their investors are focused on the reliability of such disclosures.

Although many registrants have voluntarily obtained some level of assurance for their climate-related disclosures, current voluntary ESG assurance practices have been varied with respect to the levels of assurance provided (*e.g.,* limited versus reasonable), the assurance standards used, the types of service providers, and the scope of disclosures covered by the assurance. This fragmentation has diminished the comparability of the assurance provided and may require investors to become familiar with many different assurance standards and the varying benefits of different levels of assurance. The consequences of such fragmentation has also been highlighted by certain international organizations,[588] including IOSCO, which stated that the "perceived lack of clarity and consistency around the purpose and scope of [voluntary] assurance . . . potentially lead[s] to market confusion, including misleading investors and exacerbating the expectations gap."[589] For example, investors may see that a service provider has produced an assurance report for a registrant's GHG emissions disclosure and have an expectation that such assurance will enhance the reliability of that disclosure without always understanding the service provider's qualifications for producing the report, what level of assurance (*e.g.*, limited versus reasonable) is being provided, what scope of assurance (*e.g.*, the disclosures covered by the assurance) is being provided with respect to the registrant's GHG

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[588] International Federation of Accountants, *The State of Play in Sustainability Assurance* (June 23, 2021), available at https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/state-play-sustainability-assurance; Lawrence Heim, International Federation of Accountants, *IFAC: Poor ESG Assurance an "Emerging Financial Stability Risk"* (July 1, 2021), available at https://practicalesg.com/2021/07/ifac-poor-esg-assurance-an-emerging-financial-stability-risk/.

[589] IOSCO, *Report on Sustainability-related Issuer Disclosures* (June 2021).

emissions disclosure, and the methodologies and procedures that the attestation provider used. While some experienced assurance providers may be proficient in applying attestation standards to GHG emissions disclosures, other assurance providers may lack GHG emissions expertise. Similarly, some service providers providing assurance may have expertise in GHG emissions but have minimal assurance experience. Moreover, some service providers may use standards that are developed by accreditation bodies with notice and public comment and other robust due process procedures[590] for standard setting, while other service providers may use privately developed "verification" standards.[591]

To improve accuracy, comparability, and consistency with respect to the proposed GHG emissions disclosure, we are proposing to require a minimum level of attestation services for accelerated filers and large accelerated filers including: (1) limited assurance for Scopes 1 and 2 emissions disclosure that scales up to reasonable assurance after a specified transition period; (2) minimum qualifications and independence requirements for the attestation service provider; and (3) minimum requirements for the accompanying attestation report. These proposed requirements would be minimum standards that the GHG emissions attestation provider engaged by accelerated filers and large accelerated filers must meet, but, as mentioned above, would not prevent a registrant from obtaining a heightened level of assurance over its climate-related disclosures (prior to the transition to reasonable assurance) or to obtain assurance over climate-related disclosures other than Scope 1 and Scope 2 emissions.

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[590] *See infra* Section II.H.3.

[591] *See, e.g.,* CAQ, *S&P 500 and ESG Reporting* (Aug. 9, 2021) (pointing to the use of assurance methodologies developed by individual service providers, which in some cases were based on IAASB International Standard on Assurance Engagements (ISAE) 3000 with modifications).

By specifying minimum standards for the attestation provided with respect to GHG emissions disclosure by accelerated filers and large accelerated filers, the proposed rules should improve accuracy and consistency in the reporting of this information, while also providing investors with an enhanced level of reliability against which to evaluate the disclosure. In addition to the proposed minimum standards for attestation services, the proposed additional disclosure requirements for registrants, described below, should further assist investors in understanding the qualifications and suitability of the GHG emissions attestation provider selected by the registrant, particularly in light of the broad spectrum of attestation providers that would be permitted to provide attestation services under the proposed rules.

Although we are proposing certain minimum standards for attestation services, this proposal does not aim to create or adopt a specific attestation standard for assuring GHG emissions, just as this proposal does not define a single methodology for calculating GHG emissions. This is because both the reporting and attestation landscapes are currently evolving and it would be premature to adopt one approach and potentially curtail future innovations in these two areas. The evolving nature of GHG emissions calculations and attestation standards could suggest that it may also be premature to require assurance. We are soliciting comment on the feasibility of our proposal and will consider any public feedback received, but we have preliminarily determined that the phased-in approach that we are proposing, along with an extended period for disclosure compliance for accelerated filers, balances the benefits of third-party review with the costs of seeking assurance in this evolving space.

The proposed minimum standards for attestation services and the proposed additional disclosure requirements would not eliminate fragmentation with respect to assurance or obviate the need for investors to assess and compare multiple attestation standards. Nevertheless, we believe some flexibility in our approach is warranted at this time given the unique and evolving nature of third-party assurance for climate-related disclosures. We believe the proposed minimum standards and additional disclosure requirements would enable investors to better understand the assurance that has been provided.

We are cognizant of the fact that the calculation and disclosure of GHG emissions would be new for many registrants, as would be the application of assurance standards to GHG emissions disclosure. For these reasons and the reasons discussed in greater detail below, we are proposing to require assurance (1) only for accelerated filers and large accelerated filers, (2) only with respect to Scope 1 and Scope 2 emissions, and (3) with an initial transition period for limited assurance and a subsequent transition period for reasonable assurance.

Although we have considered the challenges that mandatory assurance of GHG emissions disclosure could present, accelerated filers and large accelerated filers should have the necessary resources to devote to complying with such requirements over the proposed implementation timetable. For the many large accelerated filers that are already voluntarily obtaining some form of assurance over their GHG emissions, any cost increases associated with complying with the proposed rules would be mitigated.[592] Furthermore, larger issuers generally bear proportionately

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[592] *See, e.g.,* CAQ, *S&P 500 and ESG Reporting* (Aug. 9, 2021) (providing statistics on limited assurance versus reasonable assurance obtained voluntarily in the current market (*e.g.*, at least 26 of 31 companies that obtained assurance from public company auditors obtained limited assurance; at least 174 of 235 companies that obtained assurance or verification from other service providers (non-public company auditors) obtained limited assurance)). For similar information on the S&P 100, see CAQ, *S&P 100 and ESG Reporting* (Apr. 29, 2021), available at https://www.thecaq.org/sp-100-and-esg-reporting/. Based on an analysis by Commission staff on Mar. 3, 2022, a substantial number of the S&P 500 companies (460+) are large accelerated filers and therefore would be subject to the proposed assurance requirements.

lower compliance costs than smaller issuers due to the fixed cost components of such compliance.[593]

The proposed transition periods would also provide existing accelerated filers and large accelerated filers one fiscal year to transition to limited assurance[594] and two additional fiscal years to transition to reasonable assurance.[595] For existing accelerated filers, this transition period would be in addition to the one additional year they will have to comply with the Scopes 1 and 2 emission disclosure requirements (compared to large accelerated filers). As such, these filers would have significant time to develop processes to support their GHG emissions disclosure requirements and the relevant DCP, as well as to adjust to the incremental costs and efforts associated with escalating levels of assurance. During this transition period, GHG emissions attestation providers would also have time to prepare themselves for providing such services in connection with Commission filings.

In addition to the challenges posed by the newness of calculating and disclosing GHG emissions, we believe that only requiring assurance over Scope 1 and Scope 2 emissions would be appropriate because the emissions result directly or indirectly from facilities owned or

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[593] *See infra* note 948 in Section IV.C of the Economic Analysis for further discussion on proportionate costs between different types of filers.

[594] *See infra* note 604 for a discussion of the key differences between limited and reasonable assurance engagements.

[595] By limiting the assurance requirements to accelerated filers and large accelerated filers, a new registrant would not be required to provide assurance until it has been subject to the requirements of Section 13(a) or 15(d) of the Exchange Act for a period of at least twelve calendar months and it has filed at least one annual report pursuant to Section 13(a) or 15(d) of the Exchange Act. *See* 17 CFR 240.12b-2. Therefore, no registrant would be required to provide assurance covering its GHG emissions disclosure during an initial public offering. However, any registrant that voluntarily includes an attestation report for GHG emissions disclosure would be required to comply with proposed Item 1505(e).

activities controlled by a registrant, which makes it relatively more accessible and easier to subject to the registrant's DCP compared to Scope 3 data. Further, as discussed earlier, many registrants already voluntarily seek assurance over their GHG emissions disclosure (predominately Scope 1 and Scope 2 disclosures),[596] which further supports the feasibility and readiness of Scope 1 and Scope 2 emissions disclosure for mandatory assurance. In contrast, we are not proposing to require assurance of Scope 3 emissions disclosure at this time because the preparation of such disclosure presents unique challenges.[597] Depending on the size and complexity of a company and its value chain, the task of calculating Scope 3 emissions could be relatively more burdensome and expensive than calculating Scope 1 and Scope 2 emissions. In particular, it may be difficult to obtain activity data from suppliers, customers, and other third parties in a registrant's value chain, or to verify the accuracy of that information compared to

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[596] For specific examples, *see, e.g.,* Etsy, Inc. FY 2021 Form 10-K, available at https://s22.q4cdn.com/941741262/files/doc_financials/2021/q4/ETSY-12.31.2021-10K.pdf (external third-party attestation report available at https://s22.q4cdn.com/941741262/files/doc_financials/2021/q4/PwC-Limited-Assurance-Report-Assertion-Etsy-FY21_2.24.22_final-signed_final.pdf); Johnson Controls International plc 2021 Sustainability Report, available at https://www.johnsoncontrols.com/2021sustainability (external third-party verification report available at https://www.johnsoncontrols.com/-/media/jci/corporate-sustainability/reporting-and-policies/gri/2020/ghg-jci-fy-2020-verification-statement.pdf); Norfolk Southern Corporation 2021 GHG Emissions Report, available at http://www.nscorp.com/content/dam/nscorp/get-to-know-ns/about-ns/environment/2020-GHG-Emissions-Report.pdf; Koninklijke Philips NV (Royal Philips) Annual Report 2021, at 269, available at https://www.results.philips.com/publications/ar21/downloads/pdf/en/PhilipsFullAnnualReport2021-English.pdf?v=20220225104533; Starbucks Coffee Company FY 2020 GHG emissions inventory assurance report, at 2, available at https://stories.starbucks.com/uploads/2021/04/Starbucks-FY20-Third-Party-Independent-Verification-and-Assurance-Reports.pdf; and Vornado Realty Trust FY 2020 ESG report, available at https://books.vno.com/books/idpn/#p=1. *See also supra* note 592 for S&P 100 and S&P 500 related statistics.

[597] *See supra* Section II.G.3 for further discussion of the unique challenges presented by the disclosure of Scope 3 emissions.

disclosures of Scope 1 and Scope 2 emissions data, which are more readily available to a registrant.

We are proposing to require accelerated filers and large accelerated filers to obtain limited assurance, with an eventual scaling up to reasonable assurance. The objective of a limited assurance engagement is for the service provider to express a conclusion about whether it is aware of any material modifications that should be made to the subject matter (*e.g.*, the Scopes 1 and 2 emissions disclosure) in order for it to be fairly stated or in accordance with the relevant criteria (*e.g.*, the methodology and other disclosure requirements specified in proposed 17 CFR 229.1504 (Item 1504 of Regulation S-K).[598] In such engagements, the conclusion is expressed in the form of negative assurance regarding whether any material misstatements have been identified.[599] In contrast, the objective of a reasonable assurance engagement, which is the same level of assurance provided in an audit of a registrant's consolidated financial statements, is to express an opinion on whether the subject matter is in accordance with the relevant criteria, in all material respects. A reasonable assurance opinion provides positive assurance that the subject matter is free from material misstatement.[600]

Reasonable assurance is feasible whenever limited assurance can be provided on a subject,[601] and as noted above the voluntary attestation obtained by some registrants has been at

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598 *See, e.g.*, AICPA's Statement on Standards for Attestation Engagements (SSAE) No.22, AT-C Section 210.

599 *See infra* Section II.H.3 for further discussion of the attestation report requirements, including the difference between a conclusion and an opinion.

600 *See, e.g.*, AICPA SSAE No. 21, AT-C Sections 205 and 206.

601 Under commonly used attestation standards, both a reasonable assurance engagement and a limited assurance engagement have the same requirement that the subject matter (*e.g.,* Scope 1 and Scope 2 emissions) of the

the reasonable assurance level.[602] We understand, however, that a limited assurance engagement is less extensive and is currently the level of assurance most commonly provided[603] in the voluntary assurance market for climate-related disclosure.[604] Therefore, prior to the transition to reasonable assurance, the additional compliance efforts required to comply with the proposed assurance requirement should be limited for the many registrants that—according to commenters and others—are already obtaining limited assurance for their climate-related disclosures.[605] Furthermore, although reasonable assurance provides a significantly higher level of assurance than limited assurance, we believe limited assurance would benefit investors during the initial transition period by enhancing the reliability of a registrant's Scopes 1 and 2 emissions disclosure, in light of the benefits that assurance provides, as discussed above. Moreover, under

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engagement be appropriate as a precondition for providing assurance. Thus, if the subject matter is appropriate for a limited assurance engagement, it is also appropriate for a reasonable assurance engagement. *See* AICPA SSAE No. 18 (Apr. 2016); and IAASB ISAE 3000 (Revised) (Dec. 2013).

602 For example, some registrants have voluntarily sought reasonable assurance over certain information, including Scopes 1, 2, and 3 emissions, for which others have voluntarily sought limited assurance. *See, e.g.,* Apple, Inc. Environmental Progress Report (Mar. 2021), at 88-90, available at https://www.apple.com/environment/pdf/Apple_Environmental_Progress_Report_2021.pdf; United Parcel Service, Inc. (UPS) FY 2020 GRI Content Index, at 72, available at https://about.ups.com/content/dam/upsstories/assets/reporting/sustainability-2021/2020_UPS_GRI_Content_Index_081921v2.pdf; and Guess?, Inc. FY2020-2021 Sustainability Report , at 91, available at https://static1.squarespace.com/static/609c10ed49db5202181d673f/t/60faf8af82418f5da4778f6f/1627060411937/GUESS+FY20-21+Sustainability+Report.pdf.

603 *See supra* note 592 (providing statistics on limited assurance obtained voluntarily in the current market).

604 The scope of work in a limited assurance engagement is substantially less than a reasonable assurance engagement. The primary difference between the two levels of assurance relates to the nature, timing, and extent of procedures required to obtain sufficient, appropriate evidence to support the limited assurance conclusion or reasonable assurance opinion. Limited assurance engagements primarily include procedures such as inquiries and analytical procedures and do not necessarily include a consideration of whether internal controls have been effectively designed, whereas reasonable assurance engagements require the assurance service provider to consider and obtain an understanding of internal controls. More extensive testing procedures beyond inquiries and analytical procedures, including recalculation and verification of data inputs, are also required in reasonable assurance engagements, such as inspecting source documents that support transactions selected on a sample basis. Driven by these differences, the cost of limited assurance is generally lower than that of reasonable assurance.

605 *See* letters from CAQ and Energy Infrastructure Council; *supra* note 592 (providing statistics on voluntary assurance obtained by S&P 100 and S&P 500 companies).

the proposed rules, accelerated filers and large accelerated filers would not be prevented from obtaining reasonable assurance for their climate disclosures earlier than required. After the transition to mandatory reasonable assurance, investors would have the benefits of a higher level of assurance with smaller incremental costs to accelerated filers and large accelerated filers than moving directly to a reasonable assurance requirement.

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135. Should we require accelerated filers and large accelerated filers to obtain an attestation report covering their Scope 1 and Scope 2 emissions disclosure, as proposed? Should we require accelerated filers and large accelerated filers to obtain an attestation report covering other aspects of their climate-related disclosures beyond Scope 1 and 2 emissions? For example, should we also require the attestation of GHG intensity metrics, or of Scope 3 emissions, if disclosed? Conversely, should we require accelerated filers and large accelerated filers to obtain assurance covering only Scope 1 emissions disclosure? Should any voluntary assurance obtained by these filers after limited assurance is required be required to follow the same attestation requirements of Item 1505(b)–(d), as proposed?

136. If we required accelerated filers and large accelerated filers to obtain an attestation report covering Scope 3 emissions disclosure, should the requirement be phased-in over time? If so, what time frame? Should we require all Scope 3 emissions disclosure to be subject to assurance or only certain categories of Scope 3 emissions? Would it be possible for accelerated filers and large accelerated filers to obtain an attestation report covering the process or methodology for calculating Scope 3 emissions rather than obtaining an attestation report covering the calculations of Scope 3 emissions? Alternatively, is there

another form of verification over Scope 3 disclosure that would be more appropriate than obtaining an attestation report?

137. Should the attestation requirement be limited to accelerated filers and large accelerated filers, as proposed? Alternatively, should the attestation requirement be limited to a subset of accelerated filers and large accelerated filers? If so, what conditions should apply? Should the attestation requirement only apply to well-known seasoned issuers?[606] Should the attestation requirement also apply to other types of registrants? Should we create a new test for determining whether the attestation requirements apply to a registrant that would take into account the resources of the registrant and also apply to initial public offerings? For example, should we create a test similar to the SRC definition,[607] which includes a separate determination for initial registration statements, but using higher public float and annual revenue amounts?

138. Instead of requiring only accelerated filers and large accelerated filers to include an attestation report for Scope 1 and Scope 2 emissions, should the proposed attestation requirements also apply to registrants other than accelerated filers and large accelerated filers? If so, should the requirement apply only after a specified transition period? Should such registrants be required to provide assurance at the same level as accelerated filers and large accelerated filers and over the same scope of GHG emissions disclosure, or should we impose lesser requirements (*e.g.*, only limited assurance and/or assurance over Scope 1 emissions disclosure only)?

606 *See* 17 CFR 230.405 (defining "well-known seasoned issuer").

607 *See, e.g.*, 17 CFR 240.12b-2.

139. Should we require accelerated filers and large accelerated filers to initially include attestation reports reflecting attestation engagements at a limited assurance level, eventually increasing to a reasonable assurance level, as proposed? What level of assurance should apply to the proposed GHG emissions disclosure, if any, and when should that level apply? Should we provide a one fiscal year transition period between the GHG emissions disclosure compliance date and when limited assurance would be required for accelerated filers and large accelerated filers, as proposed? Should we provide an additional two fiscal year transition period between when limited assurance is first required and when reasonable assurance is required for accelerated filers and large accelerated filers, as proposed?

140. Should we provide the same transition periods (from the Scopes 1 and 2 emissions disclosure compliance date) for accelerated filers and large accelerated filers, as proposed? Instead, should different transition periods apply to accelerated filers and large accelerated filers? Should we provide transition periods with different lengths than those proposed? Should we require the attestation to be at a reasonable assurance level without having a transition period where only limited assurance is required? Should we instead impose assurance requirements to coincide with reporting compliance periods?

141. Under prevailing attestation standards, "limited assurance" and "reasonable assurance" are defined terms that we believe are generally understood in the marketplace, both by those seeking and those engaged to provide such assurance. As a result, we have not proposed definitions of those terms. Should we define "limited assurance" and "reasonable assurance" and, if so, how should we define them? Would providing definitions in this context cause confusion in other attestation engagements not covered by

the proposed rules? Are the differences between these types of attestation engagements sufficiently clear without providing definitions?

142. As proposed, there would be no requirement for a registrant to either provide a separate assessment and disclosure of the effectiveness of controls over GHG emissions disclosure by management or obtain an attestation report from a GHG emissions attestation provider specifically covering the effectiveness of controls over GHG emissions disclosure. Should we require accelerated filers and large accelerated filers to provide a separate management assessment and disclosure of the effectiveness of controls over GHG emissions disclosure (separate from the existing requirements with respect to the assessment and effectiveness of DCP)? Should we require management to provide a statement in their annual report on their responsibility for the design and evaluation of controls over GHG emissions disclosure and to disclose their conclusion regarding the effectiveness of such controls? Instead of, or in addition to, such management assessment and statement, should we require the registrant to obtain an attestation report from a GHG emissions attestation provider that covers the effectiveness of such GHG emissions controls as of the date when the accelerated filer or large accelerated filer is required to comply with the reasonable assurance requirement under proposed Item 1505(a)? If so:

(i) Would it be confusing to apply either such requirement in light of the existing DCP requirements that would apply to the proposed GHG emissions disclosure?

(ii) Would a separate management assessment and statement on the effectiveness of controls over GHG emissions provide meaningful disclosure to investors beyond the existing requirement for DCP?

(iii) Should we specify that the separate management assessment and statement must be provided by the accelerated filer's or large accelerated filer's principal executive and principal financial officers, or persons performing similar functions? Should we clarify which members of the accelerated filer or large accelerated filer's management should be involved in performing the underlying assessment?

(iv) What controls framework(s) would the effectiveness of the registrant's controls over GHG emissions disclosure be evaluated against, if any?

(v) For the GHG emissions attestation provider, what requirements should be applied to such GHG emissions disclosure controls attestation requirement? For example, what attestation standards should apply? Should other service provider(s) in addition to or in lieu of the GHG emissions attestation provider be permitted to provide such attestation over the effectiveness of the GHG controls?

(vi) Should we limit such a requirement to accelerated filers and large accelerated filers only or should it apply to other registrants as well?

(vii) What would be the potential benefits and costs of either approach?

(viii) Should we require a certification on the design and evaluation of controls over GHG emissions disclosures by officers serving in the principal executive and principal financial officer roles or persons performing similar functions for an accelerated filer or large accelerated filer? Would a certification requirement have any additional benefits or impose any additional costs when compared to a requirement for management to assess and disclose in a statement in the annual report the effectiveness of controls over GHG emissions?

143. We considered whether to require registrants to include the GHG emissions metrics in the notes or a separate schedule to their financial statements, by amending Regulation S-X instead of Regulation S-K.

(i) Would there be benefits to including this information in a registrant's financial statements? For example, would requiring the GHG emissions disclosure to be included in the financial statements improve the consistency, comparability, reliability, and decision-usefulness of the information for investors? Would it facilitate the integration of GHG metrics and targets into the registrant's financial analysis? Would such placement cause registrants to incur significantly more expense in obtaining an audit of the disclosure? If so, please quantify those additional expenses where possible.

(ii) Should we require a registrant to include the GHG emissions disclosure in its audited financial statements so that the disclosure would be subject to the existing requirements for an independent audit and ICFR? If so, we seek comment on the following aspects of this alternative:

(a) If GHG emissions disclosure is subject to ICFR, or an internal control framework similar to ICFR, would GHG emissions disclosure be more reliable compared to what is currently proposed? What are the benefits or costs?

(b) Should the GHG emissions disclosure be included in a note to the registrant's financial statements (*e.g.,* in the note where the proposed financial statement metrics as discussed above in Section II.F would be included) or in a schedule, or somewhere else? If the GHG emissions disclosure was required in the financial statements, should it be subject to a reasonable assurance audit like the other information in the financial statements? If in a schedule, should the GHG emissions disclosure be disclosed in a schedule similar to those required under Article 12 of Regulation S-X, which would subject the disclosure to audit and ICFR requirements? Should we instead require the metrics to be disclosed as supplemental financial information, similar to the disclosure requirements under FASB ASC Topic 932-235-50-2 for registrants that have significant oil- and gas-producing activities? If so, should such supplemental schedule be subject to ICFR requirements? Instead of requiring the GHG emissions disclosure to be included in a note to the registrant's audited financial statements, should we require a new financial statement for such metrics?

(c) PCAOB auditing standards apply to the audit of a registrant's financial statements. If GHG emissions disclosure is included in a supplemental schedule to the financial statements, should we allow other auditing standards to be applied? If so, which ones? What, if any, additional guidance or revisions to such standards would be needed in order to apply them to the audit of GHG emissions disclosure?

(d) What are the costs and benefits of employing registered public accounting firms to perform audits of GHG emissions disclosure and related attestation of internal controls? Are there potential cost savings in employing registered public accountants that currently perform audits of financial statements and attestation of ICFR to review GHG emissions disclosure and any related internal controls? If we require GHG emissions disclosure to be presented in the financial statements, should we permit entities other than registered public accounting firms to provide assurance of this information, as proposed for the current attestation requirements under Regulation S-K? If not limited to registered public accounting firms, who should be permitted to provide assurance of GHG emissions disclosure? Should we permit environmental consultants, engineering firms, or other types of specialists to provide assurance? What are the costs and benefits of such approach? Would the reliability of the audits and therefore the information disclosed be affected if assurance providers other than registered public accounting firms are permitted to conduct these audits? Please provide supporting data where possible. If we should allow for assurance providers that are not registered public accounting firms, what qualifications and oversight should they have, and what requirements should we impose on them? Should we direct the PCAOB to develop a separate registration process for service providers that are not otherwise registered? What expertise, independence and quality control standards should apply?

(e) What would be the other potential benefits and costs of such an approach?

2. GHG Emissions Attestation Provider Requirements

The proposed rules would require the GHG emissions attestation report required by proposed Item 1505(a) for accelerated filers and large accelerated filers to be prepared and signed by a GHG emissions attestation provider.[608] The proposed rules would define a GHG emissions attestation provider to mean a person or a firm that has all of the following characteristics:

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[608] *See* proposed 17 CFR 229.1505(b).

- Is an expert in GHG emissions by virtue of having significant experience in measuring, analyzing, reporting, or attesting to GHG emissions. Significant experience means having sufficient competence and capabilities necessary to:
    - perform engagements in accordance with professional standards and applicable legal and regulatory requirements; and
    - enable the service provider to issue reports that are appropriate under the circumstances.[609]
- Is independent with respect to the registrant, and any of its affiliates,[610] for whom it is providing the attestation report, during the attestation and professional engagement period.[611]

The proposed expertise requirement is intended to help ensure that the service provider preparing the attestation report has sufficient competence and capabilities necessary to execute the attestation engagement. In this regard, if the service provider is a firm, we would expect that it have policies and procedures designed to provide it with reasonable assurance that the personnel selected to conduct the GHG emissions attestation engagement have significant experience with respect to both attestation engagements and GHG disclosure. This would mean that the service provider has the qualifications necessary for fulfillment of the responsibilities

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609 *See* proposed 17 CFR 229.1505(b)(1).

610 "Affiliates," for purposes of proposed 17 CFR 229.1505 has the meaning provided in 17 CFR 210.2-01, except references to "audit" are deemed to be references to the attestation services provided pursuant to this section. *See* proposed 17 CFR 229.1505(b)(2)(iii).

611 *See* proposed 17 CFR 229.1505(b)(2) and 229.1505(b)(2)(iv) (defining the term "attestation and professional engagement period").

that it would be called on to assume, including the appropriate engagement of specialists, if needed.[612] The proposed expertise requirement would apply to the person or the firm signing the GHG emissions attestation report.[613]

The second proposed requirement is modeled on the Commission's qualifications for accountants under 17 CFR 210.2-01 (Rule 2-01 of Regulation S-X), which are designed to ensure that auditors are independent of their audit clients. Similar to how assurance provided by independent public accountants improves the reliability of financial statements and disclosures and is a critical component of our capital markets, assurance of GHG emissions disclosure by independent service providers should also improve the reliability of such disclosure. Academic studies demonstrate that assurance provided by an independent auditor reduces the risk that an entity provides materially inaccurate information to external parties, including investors, by facilitating the dissemination of transparent and reliable financial information.[614] We expect that

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612 Independent auditors and accountants are already required to comply with similar quality control and management standards when providing audit and attest services under the PCAOB, AICPA, or IAASB standards. *See, e.g.,* PCAOB, Quality Control (QC) Standards Section 20 *System of Quality Control for a CPA Firm's Accounting and Auditing Practice* and Section 40 *The Personnel Management Element of a Firm's System of Quality Control – Competencies Required by a Practitioner-in-Charge of an Attest Engagement*, available at https://pcaobus.org/oversight/standards/qc-standards; AICPA, QC Section 10, *A Firm's System of Quality Control,* available at https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/qc-00010.pdf; and IAASB, International Standard on Quality Management 1, *Quality Management for Firms that Perform Audits or Reviews of Financial Statements, or Other Assurance or Related Services Engagements,* available at https://www.ifac.org/system/files/publications/files/IAASB-Quality-Management-ISQM-1-Quality-Management-for-Firms.pdf.

613 We have adopted similar expertise requirements in the past to determine eligibility to prepare a mining technical report. Although also relating to technical, specialized disclosures, the mining technical report requirements differ in that such an engagement is not an assurance engagement. *See Modernization of Property Disclosures for Mining Registrants,* Release No. 33-10570 (Oct. 31, 2018), [83 FR 66344 (Dec. 26, 2018)].

614 *See* Mark Defond & Jieying Zhang, *A Review of Archival Auditing Research*, 58 J. ACCT. & ECON., 275 (2014); *Qualifications of Accountants*, Release No. 33-10876 (Oct. 16, 2020) [85 FR 80508 (Dec. 11, 2020)], at 80508 ("The Commission has long recognized that an audit by an objective, impartial, and skilled professional contributes to both investor protection and investor confidence"). *See also* Statement of Paul Munter, Acting

GHG emissions disclosure would similarly benefit if assured by an independent service provider. Moreover, the potential conflicts of interest, or even the appearance of such conflicts of interest, between the GHG emissions attestation provider and the registrant could raise doubts for investors about whether they can rely on the attestation service and its report.

Similar to Rule 2-01 of Regulation S-X,[615] the proposed rules would provide that a GHG emissions attestation provider is not independent if during the attestation and professional engagement period such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider's engagement.[616] The proposed definition for the attestation and professional engagement period, which is modeled on Rule 2-01 of Regulation S-X, includes both (1) the period covered by the attestation report and (2) the period of the engagement to attest to the registrant's GHG emissions or to prepare a report filed with the Commission (the "professional engagement period"). Under the proposed rules, the professional engagement period would begin when the GHG attestation service provider either signs an initial engagement letter (or other agreement to attest to a registrant's GHG emissions) or begins attest procedures, whichever is earlier.[617]

The proposed rules would further state that, in determining whether a GHG emissions attestation provider is independent, the Commission will consider:

Chief Accountant, *The Importance of High Quality Independent Audits and Effective Audit Committee Oversight to High Quality Financial Reporting to Investors* (Oct. 26, 2021).

615 *See* 17 CFR 210.2-01(b).

616 *See* proposed 17 CFR 229.1505(b)(2)(i).

617 *See* proposed 17 CFR 229.1505(b)(2)(iv).

- whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant (or any of its affiliates), places the attestation provider in the position of attesting to such attestation provider's own work, results in the attestation provider acting as management or an employee of the registrant (or any of its affiliates), or places the attestation provider in a position of being an advocate for the registrant (or any of its affiliates);[618] and
- all relevant circumstances, including all financial or other relationships between the attestation provider and the registrant (or any of its affiliates), and not just those relating to reports filed with the Commission.[619]

These proposed provisions are modeled on the factors used by the Commission in determining whether an accountant is independent.[620] Similar to Rule 2-01 of Regulation S-X, the proposed provisions should help protect investors by requiring the GHG emissions attestation provider to be independent both in fact and appearance from the registrant, including its affiliates.

Because the GHG emissions attestation provider would be a person whose profession gives authority to the statements made in the attestation report and who is named as having

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618 *See* proposed 17 CFR 229.1505(b)(2)(ii)(A).

619 *See* proposed 17 CFR 229.1505(b)(2)(ii)(B).

620 *See* 17 CFR 210.2-01. For the avoidance of doubt, we note that if the independent accountant who audits the registrant's consolidated financial statements is also engaged to perform the GHG emissions attestation for the same filing, the fees associated with the GHG emissions attestation engagement would be considered "Audit-Related Fees" for purposes of Item 9(e) of 17 CFR 240.14a-101, Item 14 of Form 10-K, Item 16C of Form 20-F, or any similar requirements.

provided an attestation report that is part of the registration statement, the registrant would be required to obtain and include the written consent of the GHG emissions attestation provider pursuant to Securities Act Section 7,[621] the corresponding rule requiring the written consents of such experts,[622] and the Regulation S-K provision requiring the attachment of the written consent of an expert to a Securities Act registration statement or an Exchange Act report that incorporates by reference a written expert report attached to a previously filed Securities Act registration statement.[623] The GHG emissions attestation provider would also be subject to liability under the federal securities laws for the attestation conclusion or, when applicable, opinion provided. Such liability should encourage the attestation service provider to exercise due diligence with respect to its obligations under a limited or reasonable assurance engagement.

Request for Comment

144. Should we require a registrant to obtain a GHG emissions attestation report that is provided by a GHG emissions attestation provider that meets specified requirements, as proposed? Should one of the requirements be that the attestation provider is an expert in GHG emissions, with significant experience in measuring, analyzing, reporting, or attesting to GHG emissions, as proposed? Should we specify that significant experience means having sufficient competence and capabilities necessary to: (a) perform engagements in accordance with professional standards and applicable legal and regulatory requirements and (b) enable the service provider to issue reports that are appropriate under the circumstances, as proposed? Should we instead require that the GHG emissions attestation provider have a specified number

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[621] 15 U.S.C. 77g.

[622] *See* 17 CFR 230.436.

[623] *See* 17 CFR 229.601(b)(23).

of years of the requisite type of experience, such as 1, 3, 5, or more years? Should we specify that a GHG emissions attestation provider meets the expertise requirements if it is a member in good standing of a specified accreditation body that provides oversight to service providers that apply attestation standards? If so, which accreditation body or bodies should we consider (*e.g.,* AICPA)? Are there any other requirements for the attestation provider that we should specify? Instead, should we require a GHG emissions attestation provider to be a PCAOB-registered audit firm?

145. Is additional guidance needed with respect to the proposed expertise requirement? Should we instead include prescriptive requirements related to the qualifications and characteristics of an expert under the proposed rules? For example, should we include a provision that requires a GHG emissions attestation provider that is a firm to have established policies and procedures designed to provide it with reasonable assurance that the personnel selected to provide the GHG attestation service have the qualifications necessary for fulfillment of the responsibilities that the GHG emissions attestation provider will be called on to assume, including the appropriate engagement of specialists, if needed?

146. Should we require the GHG emissions attestation provider to be independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report, as proposed? Should we specify that a GHG emissions attestation provider is not independent if such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider's engagement, as proposed? The proposed provision is based on a similar provision regarding the qualification of an accountant to be an independent auditor under Rule 2-01 of Regulation S-X.

Is Rule 2-01 an appropriate model for determining the independence of a GHG emissions attestation provider? Is being independent from a registrant and its affiliates an appropriate qualification for a GHG emissions attestation provider?

147. Should we specify that the factors the Commission would consider in determining whether a GHG emissions attestation provider is independent include whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant, including its affiliates, places the attestation provider in the position of attesting to such attestation provider's own work, results in the attestation provider acting as management or an employee of the registrant, including its affiliates, or places the attestation provider in a position of being an advocate for the registrant and its affiliates, as proposed? Should we specify that the Commission also will consider all relevant circumstances, including all financial and other relationships between the attestation provider and the registrant, including its affiliates, and not just those relating to reports filed with the Commission, as proposed?

148. Should we adopt all of the proposed factors for determining the independence of a GHG emissions attestation provider, or are there factors we should omit? Are there any additional factors that we should specify that the Commission will consider when determining the independence of a GHG emissions attestation provider? For example, should we include any non-exclusive specifications of circumstances that would be inconsistent with the independence requirements, similar to those provided in 17 CFR 210.2-01(c) (Rule 2-01(c) of Regulation S-X)?

149. Should the definition of "affiliates" be modeled on Rule 2-01, as proposed, or should we use a different definition? Would defining the term differently than proposed cause confusion because the rest of the proposed independence requirement is modeled on Rule 2-01? Many

accountants are likely familiar with the proposed definition given their required compliance with Rule 2-01, would non-accountants understand how to comply with and apply this concept?

150. Should the term "attestation and professional engagement period" be defined in the proposed manner? If not, how should "attestation and professional engagement period" be defined? Alternatively, should the Commission specify a different time period during which an attestation provider must meet the proposed independence requirements?

151. Should we include disclosure requirements when there is a change in, or disagreement with, the registrant's GHG emissions attestation provider that are similar to the disclosure requirements in Item 4.01 of Form 8-K and 17 CFR 229.304 (Item 304 of Regulation S-K)?

152. Accountants are already required to comply with the relevant quality control and management standards when providing audit and attest services under the PCAOB, AICPA, or IAASB standards. These quality control and management standards would apply to accountants providing GHG attestation services pursuant to those standards as well. Should we require the GHG emissions attestation provider to comply with additional minimum quality control requirements (*e.g.*, acceptance and continuance of engagements, engagement performance, professional code of conduct, and ethical requirements) to provide greater consistency over the quality of service provided by GHG emissions attestation providers who do not (or cannot) use the PCAOB, AICPA, or IAASB attestation standards? If so, what should the minimum requirements be?

153. As proposed, the GHG emissions attestation provider would be a person whose profession gives authority to statements made in the attestation report and who is named as having provided an attestation report that is part of the registration statement, and therefore the registrant would be required to obtain and include the written consent of the GHG emissions

provider pursuant to Securities Act Section 7 and related Commission rules. This would subject the GHG emissions attestation provider to potential liability under Section 11 of the Securities Act. Would the possibility of Section 11 liability deter qualified persons from serving as GHG emissions attestation providers? Should we include a provision similar to 17 CFR 230.436(c), or amend that rule, to provide that a report on GHG emissions at the limited assurance level by a GHG emissions attestation provider that has reviewed such information is not considered part of a registration statement prepared or certified by a person whose profession gives authority to a statement made by him or a report prepared or certified by such person within the meaning of Section 7 and 11 of the Act?

3. GHG Emissions Attestation Engagement and Report Requirements

The proposed rules would require the attestation report required by proposed Item 1505(a) for accelerated filers and large accelerated filers to be included in the separately-captioned "Climate-Related Disclosure" section in the relevant filing and provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment.[624] The requirement that the standards be established by a body or group that has followed due process procedures would be similar to the requirements for determining a suitable, recognized control framework for use in management's evaluation of an issuer's ICFR.[625] In both cases, a specific framework is not prescribed but minimum requirements for what

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[624] *See* proposed 17 CFR 229.1505(a)(2) and (c).

[625] *See* 17 CFR 240.13a-15(c) and 240.15d-15(c) (stating that the "framework on which management's evaluation of the issuer's internal control over financial reporting is based must be a suitable, recognized control framework that is established by a body or group that has followed due-process procedures, including the broad distribution of the framework for public comment").

constitutes a suitable framework are provided. This approach would help to ensure that the standards upon which the attestation engagement and report are based are the result of a transparent, public, and reasoned process. This requirement should also help to protect investors who may rely on the attestation report by limiting the standards to those that have been sufficiently developed. Rather than prescribe a particular attestation standard, the proposed approach recognizes that more than one suitable attestation standard exists and that others may develop in the future.

In our view, the attestation standards, for example, of the PCAOB,[626] AICPA,[627] and IAASB[628] would meet this due process requirement. In addition, all of these attestation standards are publicly available at no cost to investors who desire to review them. We believe that open access is an important consideration when determining the suitability of attestation standards for application to GHG emissions disclosure because it would enable investors to evaluate the report against the requirements of the selected attestation standard. By highlighting these standards, we do not mean to imply that other standards currently used in voluntary reporting would not be suitable for use under the proposed rules. Our proposal intends to set

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[626] *See* PCAOB AT Section 101, Attest Engagements, available at https://pcaobus.org/oversight/standards/attestation-standards/details/AT101.

[627] *See* AICPA SSAE No. 18 (general attestation standard), available at https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/ssae-no-18.pdf; SSAE No. 22, Review Engagements (limited assurance standard, effective for reports dated on or after June 15, 2022), available at https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/ssae-22.pdf; and SSAE No. 21, Direct Examination Engagements (reasonable assurance standard, effective for reports dated on or after June 15, 2022 and will amend SSAE No. 18), available at https://us.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/ssae-21.pdf.

[628] *See* IAASB ISAE 3000 (Revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information, available at *https://www.ifac.org/system/files/publications/files/ISAE%203000%20Revised%20-%20for%20IAASB.pdf*. *See also* IAASB ISAE 3410, Assurance Engagements on Greenhouse Gas Statements, available at https://www.ifac.org/system/files/publications/files/Basis%20for%20Conclusions%20-%20ISAE%203410%20Assurance%20Engagements%20on%20Greenhouse%20Gas%20Statements-final_0.pdf.

minimum standards while acknowledging the current voluntary practices of registrants. As noted below, we seek comment on whether other standards currently used in the voluntary climate-related assurance market or that are otherwise under development would meet the proposed due process requirement and also be suitable for application to GHG emissions under the Commission's proposed rules.

The proposed rules would not include any requirement for a registrant to obtain an attestation report covering the effectiveness of internal control over GHG emissions disclosure, and therefore such a report would not be required even when the GHG emissions attestation engagement is performed at a reasonable assurance level. Given the current evolving state of GHG emissions reporting and assurance, we believe that existing DCP obligations, and the proposed requirement that accelerated filers and large accelerated filers initially obtain at least limited assurance of such disclosure, are appropriate first steps toward enhancing the reliability of GHG emissions disclosure. We also note that, under prevailing attestation standards for limited assurance engagements, the testing of and attestation over internal controls are not required.[629] With respect to the eventual reasonable assurance engagements, while there are requirements under prevailing attestation standards to consider and obtain an understanding of internal controls, there is no required attestation of the effectiveness of internal controls such as that included in Section 404(b) of the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act).[630]

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[629] *See, e.g.*, AICPA SSAE No. 22, AT-C § 210.A16.

[630] *See* 15 U.S.C. 7262(b) (requiring a registered public accounting firm that prepares or issues an audit report for certain issuers to attest to, and report on, the assessment made by the management of the issuer with respect to internal controls).

We recognize that the attestation standards that a GHG emissions attestation provider may use would have specific requirements for the form and content of attestation reports. The proposed rules would require a GHG emissions attestation provider to follow the specific requirements regarding form and content of the reports set forth by the attestation standard (or standards) used by such attestation provider.[631] Nevertheless, in order to provide some standardization and comparability of GHG emissions attestation reports, the proposed rules would impose minimum requirements for the GHG emissions attestation report.[632] In particular, such minimum report requirements would provide investors with consistent and comparable information about the GHG emissions attestation engagement and report obtained by the registrant when the engagement is conducted by a GHG emissions attestation provider using an attestation standard that may be less widely used or that has less robust report requirements than more prevalent standards.

The proposed minimum attestation engagement and report requirements are primarily derived from the AICPA's attestation standards (*e.g.,* SSAE No. 18), which are commonly used by accountants who currently provide GHG attestation engagement services as well as other non-GHG-related attestation engagement services, and are largely similar to the report requirements under PCAOB AT-101 and IAASB ISAE 3410. Many of the following proposed minimum attestation report requirements are also elements of an accountant's report when attesting to internal control over financial reporting, of an accountant's report on audited financial statements (which is conducted at a reasonable assurance level), or of a review report on interim financial statements (which is conducted at a limited assurance level). We explain below each of the

[631] *See* proposed 17 CFR 229.1505(c).

[632] *See* proposed 17 CFR 229.1505(c)(1) through (13).

proposed minimum components of a GHG emissions attestation report. These are all common elements of current assurance reports and are also similar to elements of other expert reports and legal opinions provided in Commission filings and other transactions.

As proposed, the GHG emissions attestation report would be required to include an identification or description of the subject matter or assertion on which the attestation provider is reporting.[633] For example, the attestation report would identify the subject matter as Scope 1 and Scope 2 emissions disclosure. If a registrant voluntarily sought attestation of additional items of disclosure, such as GHG intensity metrics or Scope 3 emissions, the attestation provider would be required to identify those additional items as well in the attestation report. If a registrant has made an assertion about the measurement or evaluation of the subject matter to the attestation provider,[634] the attestation report must include such assertion. For example, the attestation report might refer to the registrant's assertion that the Scope 1 and Scope 2 emissions disclosure included within the filing has been presented in accordance with Item 1504 of Regulation S-K. These proposed minimum requirements would elicit information that is fundamental to understanding the attestation report and would clarify the scope of the attestation report when the scope does not align with the scope of the registrant's GHG emissions disclosure (*e.g.*, when Scope 3 emissions disclosure is included in the filing but not covered by the attestation report).

The proposed rules would also require the GHG emissions attestation report to include the point in time or period of time to which the measurement or evaluation of the subject matter

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633 *See* proposed 17 CFR 229.1505(c)(1).

634 *See, e.g.*, AICPA SSAE No. 22, AT-C §210.45(c); AICPA SSAE No. 21, AT-C §205.63(c).

or assertion relates.[635] Therefore, the attestation provider would be required to identify the time period to which the Scopes 1 and 2 emissions disclosure (or other additional disclosure) relates, which would be the registrant's most recently completed fiscal year or some other 12-month period if permitted under the applicable climate-related disclosure rules[636] as well as any relevant historical period disclosure included within the filing. This proposed requirement seeks to avoid any confusion investors may have about which period or periods of the climate-related disclosures included within the filing are subject to the attestation.

The proposed rules would also require the attestation report to identify the criteria against which the subject matter was measured or evaluated.[637] For an attestation report solely covering Scopes 1 and 2 emissions disclosure, the identified criteria would include the requirements in proposed Item 1504 of Regulation S-K and, in particular, Item 1504(a), which includes presentation requirements such as disaggregation by each constituent greenhouse gas. The identified criteria would also include Item 1504(b) and the applicable instructions in Item 1504(e) regarding methodology, organizational boundary, and operational boundary. In other words, this minimum requirement would require an attestation provider to refer to the requirements with which the registrant must comply when making the disclosure that is subject to the attestation. Without the frame of reference provided by the identified criteria, the conclusion or opinion included in the report may be open to individual interpretation and misunderstanding by investors.

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635 *See* proposed 17 CFR 229.1505(c)(1).

636 As previously mentioned, we are soliciting comment regarding whether the GHG emissions should be reported as of fiscal year-end or some other 12-month period. *See supra* Section II.G.1.

637 *See* proposed 17 CFR 229.1505(c)(2).

Prevailing attestation standards require the criteria against which the subject matter is measured or evaluated to be "suitable." In the context of the proposed rules, suitable criteria would, when followed, result in reasonably consistent measurement or evaluation of the registrant's disclosure that is within the scope of the engagement. Characteristics of suitable criteria include relevance, objectivity, measurability, and completeness.[638] We believe that proposed Item 1504 of Regulation S-K would satisfy the suitable criteria requirements of the prevailing attestation standards because the proposed requirements set forth relevant, objective standards that call for measurable and complete disclosure of GHG emissions that would allow for a consistent evaluation of the registrant's disclosure.

The GHG emissions attestation report would further be required to include a statement that identifies the level of assurance provided and describes the nature of the attestation engagement.[639] For example, under the proposed rule, an attestation report providing limited assurance would need to include not only a statement that limited assurance is the provided level of assurance, but also would need to describe the scope of work performed in a limited assurance engagement, which typically would indicate that the procedures performed vary in nature, timing, and extent compared to a reasonable assurance engagement. This proposed minimum requirement would help investors understand the level of assurance provided.

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638 *See, e.g.*, AICPA SSAE No. 18, AT-C §105.A16 and .A42; AICPA SSAE No. 21, AT-C §105.A16 and .A44. In addition to relevance and completeness, the characteristics of suitable criteria under ISAE 3000.A23 include reliability, neutrality and understandability. Despite the differences in the characteristics listed, the underlying concepts and objectives are consistent.

639 *See* proposed 17 CFR 229.1505(c)(3).

The proposed rules would require the attestation report to include a statement that identifies the attestation standard (or standards) used.[640] As previously discussed, the standard used must be publicly available at no cost and have been established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment.[641] This minimum report requirement would allow investors to easily identify the attestation standard that the engagement is executed against, which is particularly important because the proposed rules do not prescribe a particular attestation standard. Understanding the attestation standard used would allow investors to better understand the attestation performed by evaluating the report against the attestation standard's requirements and would facilitate comparability across the attestation reports of different registrants.

The attestation report would also be required to include a statement that describes the registrant's responsibility to report on the subject matter or assertion being reported on in order to make it clear to investors who is ultimately responsible for the disclosure.[642] At a minimum, this proposed provision would require a statement that the registrant is responsible for the subject matter, or its assertion on the subject matter. This proposed requirement, like all of the minimum requirements, has corollaries outside of the GHG emissions context. For example, an independent auditor's audit report on a registrant's financial statements is required to include a

[640] *See* proposed 17 CFR 229.1505(c)(4).

[641] *See* proposed 17 CFR 229.1505(a)(2).

[642] *See* proposed 17 CFR 229.1505(c)(5).

statement that the registrant's management is responsible for the financial statements that are being audited.[643]

The proposed rules would further require the attestation report to include a statement that describes the attestation provider's responsibilities in connection with the preparation of the attestation report.[644] This is consistent with existing requirements in reports such as those issued by the independent auditor on the audited financial statements or a review report on the interim financial statements. For example, with respect to a limited assurance engagement, under prevailing attestation standards, the report would typically include a statement that the attestation provider's responsibilities include expressing a conclusion on the subject matter or the assertion based on the attestation provider's review.[645] Similarly, for a reasonable assurance engagement, the report would typically include a statement that the attestation provider's responsibilities include expressing an opinion on the subject matter or assertion, based on the attestation provider's examination.[646]

The proposed rules would also require the attestation report to include a statement that the attestation provider is independent, as required by proposed 17 CFR 229.1505(a).[647] Because independence from the registrant, including its affiliates, would be a necessary qualification for

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[643] *See, e.g.,* PCAOB AS 3101, par. 9(a).

[644] *See* proposed 17 CFR 229.1505(c)(6).

[645] *See, e.g.*, AICPA SSAE No.22, AT-C sec. 210.45(f).

[646] *See, e.g.*, AICPA SSAE No. 21, AT-C sec. 205.63(f) and sec. 206.12(e)(ii).

[647] *See* proposed 17 CFR 229.1505(c)(7).

the GHG emissions attestation provider,[648] the attestation report would be required to include the attestation provider's confirmation of his or her compliance with the proposed independence requirement.

The proposed rules would further require the attestation report, for a limited assurance engagement, to include a description of the work performed as a basis for the attestation provider's conclusion.[649] This proposed provision is intended to enhance the transparency of the GHG emissions attestation report for investors by eliciting disclosure about the procedures undertaken by the attestation provider in its limited assurance engagement, such as inquiries and analytical procedures. This information would allow investors to assess and understand the extent of procedures performed to support the conclusion reached by the attestation provider, which could also facilitate an investor's comparison of different attestation reports provided under the same or different attestation standards.

The GHG emissions attestation report would also be required to include a statement that describes any significant inherent limitations associated with the measurement or evaluation of the subject matter (at a minimum, Scopes 1 and 2 emissions) against the criteria (*i.e.*, the applicable requirements in proposed Item 1504).[650] Such a statement is a common characteristic of attestation reports, including the independent auditor's report on internal control over financial reporting. This proposed provision is intended to elicit disclosure about the estimation uncertainties inherent in the quantification of GHG emissions, driven by reasons such as the state of the science, methodology, and assumptions used in the measurement and reporting processes.

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648 *See supra* Section II.H.2.

649 *See* proposed 17 CFR 229.1505(c)(8).

650 *See* proposed 17 CFR 229.1505(c)(9).

For example, an attestation provider might include in its report a statement about measurement uncertainty resulting from accuracy and precision of GHG emission conversion factors.

The proposed rules would require the GHG emissions attestation report to include the attestation provider's conclusion or opinion, as applicable, based on the attestation standard(s) used.[651] For a limited assurance engagement, under prevailing attestation standards, the conclusion would typically state whether the provider is aware of any material modifications that should be made to the subject matter in order for the disclosure to be in accordance with (or based on) the requirements specified in Item 1504, or for the registrant's assertion about such subject matter to be fairly stated.[652] For a reasonable assurance engagement, the attestation provider would typically provide an opinion on whether the subject matter is in accordance with (or based on) the requirements specified in Item 1504 in all material respects, or that the registrant's assertion about its subject matter is fairly stated, in all material respects.[653]

Finally, the proposed rules would require the GHG emissions attestation report to include the signature of the attestation provider (whether by an individual or a person signing on behalf of the attestation provider's firm),[654] the city and state where the attestation report has been issued,[655] and the date of the report.[656] These are all common elements of current assurance and expert reports, and each of these proposed provisions would help to identify and confirm the validity of the GHG emissions attestation provider.

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651 *See* proposed 17 CFR 229.1505(c)(10).

652 *See, e.g.*, AICPA SSAE No. 22, AT-C sec. 210.45(l).

653 *See, e.g.*, AICPA SSAE No. 21 AT-C sec. 205.63(k) and sec. 206.12(j).

654 *See* proposed 17 CFR 229.1505(c)(11).

655 *See* proposed 17 CFR 229.1505(c)(12).

656 *See* proposed 17 CFR 229.1505(c)(13).

Request for Comment

154. Should we require the attestation engagement and related attestation report to be provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment, as proposed? Is the requirement of "due process procedures, including the broad distribution of the framework for public comment" sufficiently clear? Would the attestation standards of the PCAOB, AICPA, and IAASB meet this due process requirement? Are there other standards currently used in the voluntary climate-related assurance market or otherwise in development that would meet the due process and publicly availability requirements? For example, would verification standards commonly used by non-accountants currently, such as ISO 14064-3 and the AccountAbility's AA1000 Series of Standards, meet the proposed requirements? Are there standards currently used in the voluntary climate-related assurance market or otherwise under development that would be appropriate for use under the Commission's climate-related disclosure rules although they may not strictly meet the proposed public comment requirement? If so, please explain whether those standards have other characteristics that would serve to protect investors?

155. Should we require that the attestation standards used be publicly available at no cost to investors, as proposed? Should we permit the use of attestation standards, even if not publicly available at no cost, provided that registrants provide access to those standards at the request of their investors?

156. Should we require the GHG emissions attestation report to meet certain minimum requirements in addition to any form and content requirements set forth by the attestation standard or standards used by the GHG emissions attestation provider, as proposed? Should we

instead require that the attestation report solely meet whatever requirements are established by the attestation standard or standards used?

157. Should we adopt each of the proposed minimum requirements? Are there any proposed requirements that we should omit or add to the proposed list of minimum GHG emissions attestation report requirements?

158. Regarding the proposed provision requiring the identification of the criteria against which the subject matter was measured or evaluated, would reference to proposed Item 1504(a), Item 1504(b), and Item 1504(e)'s instructions concerning the presentation, methodology, including underlying assumptions, and organizational and operational boundaries applicable to the determination of Scopes 1 and 2 emissions meet the "suitable criteria" requirement under prevailing attestation standards (*e.g.,* AICPA SSAE No. 18, AT-C 105.A16)?

159. If we require or permit a registrant to use the GHG Protocol as the methodology for determining GHG emissions, would the provisions of the GHG Protocol qualify as "suitable criteria" against which the Scope 1 and Scope 2 emissions disclosure should be evaluated?

4. Additional Disclosure by the Registrant

In addition to the minimum attestation report requirements described above, which reflect the contents of attestation reports under prevailing attestation standards, we are proposing to require disclosure by the registrant of certain additional matters related to the attestation of a registrant's GHG emissions.[657] These disclosures are not typically included in an attestation

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[657] *See* proposed 17 CFR 229.1505(d).

report, and would not be included in the GHG emissions attestation report under the proposed rules. Instead, the registrant would be required to provide these disclosures in the separately captioned "Climate-Related Disclosure" section, where the GHG emissions disclosure would be provided pursuant to the proposed rules.[658]

These proposed additional disclosures should assist investors in evaluating the qualifications of the GHG emissions attestation provider selected by the registrant, particularly in light of the broad spectrum of attestation providers that would be permitted to provide an attestation report under the proposed rules.[659]

We considered requiring the proposed disclosures to be provided in the attestation report but are not proposing to do so because we are concerned such an approach may create confusion by conflicting with prevalent attestation standards. Furthermore, in light of the variety of attestation service providers the registrant is permitted to engage, requiring the registrant to provide such disclosures may allow the registrant to better provide its investors with relevant information about the qualifications of the service provider that the registrant engaged for the GHG emissions attestation.

With respect to the Scope 1 and Scope 2 emissions attestation required pursuant to proposed Item 1505(a) for accelerated filers and large accelerated filers,[660] the registrant would

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[658] *See id*.

[659] *See supra* Section II.H.2.

[660] If an accelerated filer or a large accelerated filer voluntarily obtains assurance beyond what would be required by proposed Item 1505(a) and uses a different service provider for such assurance, it would also be required to provide the information required by proposed Item 1505(d) for such service provider.

be required to disclose in the filing, based on relevant information obtained from any GHG emissions attestation provider:

- Whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, the identity of the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body;[661]
- Whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs);[662] and
- Whether the attestation provider is subject to record-keeping requirements with respect to the work performed for the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and the duration of those requirements.[663]

The first two above items of disclosure would help investors better understand the qualifications of the GHG emissions attestation provider, which in turn could help them assess the reliability of the attestation results. An example of a license from a licensing or accreditation body to provide assurance would be a Certified Public Accountant license issued by a state board of accountancy (*e.g.*, the California Board of Accountancy), while an example of oversight programs would include the AICPA peer review program, among others. The proposed disclosure requirement about any record-keeping requirements to which the attestation provider

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661 *See* proposed 17 CFR 229.1505(d)(1).

662 *See* proposed 17 CFR 229.1505(d)(2).

663 *See* proposed 17 CFR 229.1505(d)(3).

is subject would help enhance the transparency of the attestation process by providing investors with information about the business practices of the attestation provider that has been retained by the registrant.[664]

Request for Comment

160. Should we require certain items of disclosure related to the attestation of a registrant's GHG emissions to be provided by the registrant in its filing that includes the attestation report (where the GHG emissions and other climate-related disclosures are presented), based on relevant information obtained from the GHG emissions attestation provider, as proposed? Should these additional items of disclosure instead be included in the attestation report?

161. Should we require the registrant to disclose whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, the identity of the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body, as proposed? In lieu of disclosure, should we require a GHG emissions attestation provider to be licensed to provide assurance by specified licensing or accreditation bodies? If so, which licensing or accreditation bodies should we specify?

162. Should we require a registrant to disclose whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs), as proposed? Should we instead require the registrant to disclose whether the attestation engagement is subject to certain specified oversight programs? If so, which oversight programs should we specify?

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[664] For example, the AICPA imposes a minimum five-year documentation retention program for an audit. *See* AU-C 230.17. Although document retention is less prescriptive for attestation engagements, many attestation providers adhere to the five-year period in practice.

163. Should we require a registrant to disclose whether the attestation provider is subject to record-keeping requirements with respect to the work performed for the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and duration of those requirements, as proposed? In lieu of disclosure, should we specify that the record-keeping requirements of a GHG emissions attestation provider must be of a certain minimum duration, such as three, five, or seven years, or some other period? Should we specify that the record-keeping requirements must include certain reasonable procedures and, if so, what procedures?

5. Disclosure of Voluntary Attestation

Because GHG emissions reporting and assurance landscapes are both relatively new and evolving as described earlier, at this time, we are proposing to require a registrant, other than a large accelerated filer or an accelerated filer that is required to include a GHG emissions attestation report pursuant to proposed Item 1505(a), to disclose within the separately captioned "Climate-Related Disclosure" section in the filing the following information if the registrant's GHG emissions disclosures were subject to third-party attestation or verification:

(i) Identify the provider of such assurance or verification;[665]

(ii) Describe the assurance or verification standard used;[666]

(iii) Describe the level and scope of assurance or verification provided;[667]

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[665] *See* proposed 17 CFR 229.1505(e)(1).

[666] *See* proposed 17 CFR 229.1505(e)(2).

[667] *See* proposed 17 CFR 229.1505(e)(3).

(iv) Briefly describe the results of the assurance or verification;[668]

(v) Disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider's independence with respect to the registrant;[669] and

(vi) Disclose any oversight inspection program to which the service provider is subject (*e.g.,* the AICPA's peer review program).[670]

Taken together, these proposed disclosure items should help investors understand the nature and reliability of the attestation or verification provided and help them assess whether the voluntary assurance or verification has enhanced the reliability of the GHG emissions disclosure. We are limiting the proposed assurance disclosure requirement to a registrant's GHG emissions disclosure because registrants are more likely to obtain assurance voluntarily for this disclosure item than for other climate-related disclosures.[671] The proposed approach should mitigate the compliance burden of the proposed GHG emissions disclosure rules, taking into consideration the proportionate compliance costs that may impact accelerated and large accelerated filers versus other types of filers, while providing transparency for investors about the level and reliability of the assurance or verification, if any, provided on the GHG emissions disclosures.

Request for Comment

164. Should we require a registrant that is not required to include a GHG emissions attestation report pursuant to proposed Item 1505(a) to disclose within the separately captioned

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[668] *See* proposed 17 CFR 229.1505(e)(4).

[669] *See* proposed 17 CFR 229.1505(e)(5).

[670] *See* proposed 17 CFR 229.1505(e)(6).

[671] *See, e.g.*, letters from BNP Paribas; Eni SpA; ERM CVS; and Walmart. *See also* CAQ, *S&P 500 and ESG Reporting*.

"Climate-Related Disclosure" section in the filing the following information, if the registrant's GHG emissions disclosure was subject to third-party attestation or verification, as proposed:

(i) Identify the provider of such assurance or verification;

(ii) Disclose the assurance or verification standard used;

(iii) Describe the level and scope of assurance or verification provided;

(iv) Briefly describe the results of the assurance or verification;

(v) Disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider's independence with respect to the registrant; and

(vi) Disclose any oversight inspection program to which the service provider is subject (*e.g.,* the AICPA's peer review program), each as proposed?

Are there other disclosure items that we should require if a registrant has obtained voluntary assurance or verification of the climate-related disclosures? Are there any of the proposed disclosure items that we should omit? Should we specify parameters or include guidance on when the services provided by a third-party would be considered "assurance" or "verification" and thus require disclosure pursuant to the proposed rules? Should a registrant be required to furnish a copy of or provide a link to the assurance or verification report so that it is readily accessible by an investor?

165. Instead of requiring a registrant to disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider's independence with respect to the registrant as proposed, should we require the third-party service provider to be independent,

according to the standard proposed under Item 1505(b) for accelerated filers and large accelerated filers that are required to include a GHG emissions attestation report pursuant to proposed Item 1505(a)? If not, should we provide guidance as to what constitutes an impairment of a service provider's independence with respect to the registrant? Would this result in decision-useful information to an investor? Should we instead require a registrant to disclose whether the third-party service provider would be considered independent under some other independence requirement?

166. As proposed, a registrant would be required to disclose any oversight inspection program to which the service provider is subject, such as the PCAOB's inspection program or the AICPA's peer review program. Are there other oversight programs that we should provide as examples? Would such disclosure provide decision-useful information to an investor? Is it clear what "any oversight inspection program" would include?

167. As proposed, a registrant would not be required to disclose the voluntary assurance or verification fees associated with the GHG disclosures. Should we require GHG disclosure assurance or verification fees to be disclosed? Would such disclosure be decision-useful to investors making voting or investment decisions?

I. Targets and Goals Disclosure

If a registrant has set any climate-related targets or goals, then the proposed rules would require the registrant to provide certain information about those targets or goals.[672] Those goals

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[672] *See* proposed 17 CFR 229.1506(a)(1).

or targets might, for example, relate to the reduction of GHG emissions, or address energy usage,[673] water usage, conservation or ecosystem restoration. A registrant might also set goals with regard to revenues from low-carbon products in line with anticipated regulatory requirements, market constraints, or other goals established by a climate-related treaty, law, regulation, policy, or organization. The proposed disclosure requirements could help investors better understand the scope of a registrant's climate-related targets or goals, including those related to GHG emissions, and assist in assessing progress towards achieving those targets or goals.

Many commenters recommended that we require registrants to provide detailed information about their climate-related targets and goals, including action plans and timelines for achieving such targets as GHG emissions reductions and performance data measured against those targets.[674] This information could be important for investors in light of the fact that, according to one publication, two-thirds of S&P 500 companies had set a carbon reduction target by the end of 2020.[675] Despite the numerous commitments to reduce GHG emissions, according to several sources, many companies do not provide their investors with sufficient information to understand how the companies intend to achieve those commitments or the progress made

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[673] For example, numerous companies have pledged to achieve 100% of the electricity used in their global operations from renewable sources by 2050. *See* RE100, What are the requirements to become a RE100 member?, available at https://www.there100.org/technical-guidance.

[674] *See, e.g.*, letters from Americans for Financial Reform Education Fund and Public Citizen; Center for Law and Social Policy; Domini Impact Investments; Dynamhex, Inc.; FAIRR Initiative; Generation Investment Management; Hannon Armstrong; HP, Inc.; Interfaith Center on Corporate Responsibility; NYC Office of Comptroller; Pre-Distribution Initiative; Regenerative Crisis Response Committee; and WK Associates.

[675] *See supra* note 66 (referencing The Wall Street Journal (Nov. 5, 2021)).

regarding them.[676] The proposed disclosure requirements are intended to elicit enhanced information about climate-related targets and goals so that investors can better evaluate these points.

If a registrant has set climate-related targets or goals, the proposed rules would require it to disclose them, including, as applicable, a description of:

- The scope of activities and emissions included in the target;
- The unit of measurement, including whether the target is absolute or intensity based;
- The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, policy, or organization;
- The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;
- Any interim targets set by the registrant; and
- How the registrant intends to meet its climate-related targets or goals.[677]

This information would help investors understand a registrant's particular target or goal and a particular timeline for that target or goal, how the target or goal is to be measured, and how progress against the target or goal is to be tracked. For example, a registrant might disclose that

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[676] *See, e.g.*, Jocelyn Timperley, The Guardian, *The truth behind corporate climate pledges* (July 26, 2021); Peter Eavis and Clifford Krauss, The New York Times, *What's Really Behind Corporate Promises on Climate Change?* (May 12, 2021); and Alice C. Hill and Jennifer Nash, The Hill, *The truth behind companies' 'net zero' climate commitments* (Apr. 9, 2021).

[677] *See* proposed 17 CFR 229.1506(b)(1) through (6).

it plans to cut its Scopes 1 and 2 emissions by 50 percent by 2030.[678] The registrant might also disclose a target to reduce its Scope 3 emissions by 50 percent by 2035. In addition, the registrant might also set a goal of achieving net zero greenhouse gas emissions across its operations by 2050, in keeping with the goals of the Paris Agreement.

Under the proposed rules, the registrant would be required to disclose the baseline year for multiple targets.[679] Requiring disclosure of defined baseline time periods and baseline emissions against which progress will be tracked, with a consistent base year for multiple targets, could help investors compare the progress made towards each target. The registrant would also be required to disclose the unit of measurement, including whether the target is expressed in absolute terms or is intensity-based. If the registrant has set intervening targets (*e.g.*, reducing its Scope 3 emissions by 35 percent by 2030), the registrant would be required to disclose these targets.[680] Each of the proposed disclosure requirements is intended to provide investors with additional insight into the scope and specifics of a registrant's climate-related targets or goals.

The proposed rules would further require a registrant to discuss how it intends to meet its climate-related targets or goals.[681] This information should enable investors to better understand the potential impacts on a registrant associated with pursuing its climate-related targets or goals. For example, for a target or goal regarding net GHG emissions reduction, the discussion could include a strategy to increase energy efficiency, transition to lower carbon products, purchase carbon offsets or RECs, or engage in carbon removal and carbon storage.[682] For a registrant

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[678] *See* proposed 17 CFR 229.1506(b)(3).

[679] *See* proposed 17 CFR 229.1506(b)(4).

[680] *See* proposed 17 CFR 229.1506(b)(5).

[681] *See* proposed 17 CFR 229.1506(b)(6).

[682] *See* proposed 17 CFR 229.1506(b)(6).

operating in a water-stressed area, with the goal of reducing its freshwater needs, the discussion could include a strategy to increase the water efficiency of its operations, such as by recycling wastewater or, if in agriculture, engaging in bioengineering techniques to make crops more resilient and less water dependent. Information about how a registrant intends to achieve its climate-related target or goal could provide investors with a better understanding of the potential costs to mitigate a potential climate-related risk, such as a manufacturer's reduction of GHG emissions through implementation of a relatively high cost solution such as carbon capture and storage technology.[683]

The proposed rules would also require a registrant to disclose relevant data to indicate whether it is making progress toward achieving the target or goal and how such progress has been achieved.[684] A registrant would be required to update this disclosure each fiscal year by describing the actions taken during the year to achieve its targets or goals.[685] This proposed disclosure could help investors assess how well a registrant is managing its identified climate-related risks.

Some companies might establish climate-related goals or targets without yet knowing how they will achieve those goals. They might plan to develop their strategies over time, particularly as new technologies become available that might facilitate their achievement of their goals. The fact that a company has set a goal or target does not mean that it has a specific plan for how it will achieve those goals. What is important is that investors be informed of a

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[683] *See* proposed 17 CFR 229.1502.

[684] *See* proposed 17 CFR 229.1506(c).

[685] *See id*.

registrant's plans and progress wherever it is in the process of developing and implementing its plan.

If the registrant has used carbon offsets or RECs in its plan to achieve climate-related targets or goals, it would be required to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs.[686] For example, a carbon offset might pertain to an underlying project to reduce GHG emissions, increase the storage of carbon, or enhance GHG removals from the atmosphere. Information regarding the source, value, underlying projects, and authentication of the offsets or RECs could help investors assess the offsets or RECs and the effectiveness of the registrant's plan to achieve its climate-related targets or goals. Such information could also help investors understand changes in the use or viability of the carbon offsets or RECs as part of achieving a registrant's climate-related targets or goals that are caused by changes in regulation or markets. A reasonable investor could well assess differently the effectiveness and value to a registrant of the use of carbon offsets where the underlying projects resulted in authenticated reductions in GHG emissions compared to the use of offsets where the underlying projects resulted in the avoidance, but not the reduction, in GHG emissions or otherwise lacked verification. As some commenters have indicated, mandated detailed disclosure about the nature of a purchased carbon offset could also help to mitigate instances of greenwashing.[687]

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[686] *See* proposed 17 CFR 229.1506(d).

[687] *See, e.g.*, letter from Dimensional Fund Advisors.

Proposed 17 CFR 229.1505(a)(2) (Item 1505(a)(2)) would state that a registrant may provide the disclosures required by the section when discussing climate-related impacts on its strategy, business model, and outlook (in response to proposed Item 1502) or when discussing its transition plan as part of its risk management disclosure (in response to proposed Item 1503). If so, it need not repeat the disclosure in response to the proposed targets and goals section but should cross-refer to the section where the information has been provided.

A registrant's disclosure of its climate-related targets or goals should not be construed to be promises or guarantees. To the extent that information regarding a registrant's climate-related targets or goals would constitute forward-looking statements, which we would expect, for example, with respect to how a registrant intends to achieve its climate-related targets or goals and expected progress regarding those targets and goals, the PSLRA safe harbors would apply to such statements, assuming all other statutory requirements for those safe harbors are satisfied.

Request for Comment

168. Should we require a registrant to disclose whether it has set any targets related to the reduction of GHG emissions, as proposed? Should we also require a registrant to disclose whether it has set any other climate-related target or goal, *e.g.*, regarding energy usage, water usage, conservation or ecosystem restoration, or revenues from low-carbon products, in line with anticipated regulatory requirements, market constraints, or other goals, as proposed? Are there any other climate-related targets or goals that we should specify and, if so, which targets or goals? Is it clear when disclosure under this proposed item would be triggered, or do we need to provide additional guidance? Would our proposal discourage registrants from setting such targets or goals?

169. Should we require a registrant, when disclosing its targets or goals, to disclose:

- The scope of activities and emissions included in the target;
- The unit of measurement, including whether the target is absolute or intensity based;
- The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, or organization;
- The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;
- Any intervening targets set by the registrant; and
- How it intends to meet its targets or goals, each as proposed?

Are there any other items of information about a registrant's climate-related targets or goals that we should require to be disclosed, in addition to or instead of these proposed items? Are there any proposed items regarding such targets or goals that we should exclude from the required disclosure? If a registrant has set multiple targets or goals, should it be permitted to establish different base years for those targets or goals?

170. Should we require a registrant to discuss how it intends to meet its climate-related targets or goals, as proposed? Should we provide examples of potential items of discussion about a target or goal regarding GHG emissions reduction, such as a strategy to increase energy efficiency, a transition to lower carbon products, purchasing carbon offsets or RECs, or engaging in carbon removal and carbon storage, as proposed? Should we provide additional examples of items of discussion about climate-related targets or goals and, if so, what items should we add? Should we remove any of the proposed examples of items of discussion?

171. Should we require a registrant, when disclosing its targets or goals, to disclose any data that indicates whether the registrant is making progress towards meeting the target and how such progress has been achieved, as proposed?

172. Should we require that the disclosure be provided in any particular format, such as charts? Would certain formats help investors and others better assess these disclosures in the context of assessing the registrant's business and financial condition? What additional or other requirements would help in this regard?

173. If a registrant has used carbon offsets or RECs, should we require the registrant to disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, the nature and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs, as proposed? Are there other items of information about carbon offsets or RECs that we should specifically require to be disclosed when a registrant describes its targets or goals and the related use of offsets or RECs? Are there proposed items of information that we should exclude from the required disclosure about offsets and RECs?

174. Should we apply the PSLRA statutory safe harbors as they currently exist to forward-looking statements involving climate-related targets and goals, or other climate-related forward-looking information? Should we instead create a separate safe harbor for forward-looking climate-related information, including targets and goals? Should we adopt an exception to the PSLRA statutory safe harbors that would extend the safe harbors to climate-related forward-looking disclosures made in an initial public offering registration statement?

J. Registrants Subject to the Climate-Related Disclosure Rules and Affected Forms

The proposed climate-related disclosure rules would apply to a registrant with Exchange Act reporting obligations pursuant to Exchange Act Section 13(a)[688] or Section 15(d)[689] and companies filing a Securities Act or Exchange Act registration statement. Specifically, we are proposing to require a registrant to include climate-related disclosure in Securities Act or Exchange Act registration statements (Securities Act Forms S-1, F-1, S-3, F-3, S-4, F-4, and S-11, and Exchange Act Forms 10 and 20-F)[690] and Exchange Act annual reports (Forms 10-K and 20-F), including the proposed financial statement metrics.[691] Similar to the treatment of other important business and financial information, the proposed rules would also require registrants to

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688 15 U.S.C. 78m(a).

689 15 U.S.C. 78o(d).

690 Form 20-F is the Exchange Act form used by a foreign private issuer for its annual report or to register a class of securities under Section 12 of the Exchange Act. The proposed rules would amend Part I of Form 20-F to require a foreign private issuer to provide the climate-related disclosures pursuant to the proposed rules either when registering a class of securities under the Exchange Act or when filing its Exchange Act annual report. A foreign private issuer would also be required to comply with the proposed rules when filing a Securities Act registration statement on Form F-1. Because Form F-1 requires a registrant to include the disclosures required by Part I of Form 20-F, the proposed amendment to Form 20-F would render unnecessary a formal amendment to Form F-1. We are similarly not formally amending Forms S-3 and F-3 because the climate-related disclosure would be included in a registrant's Form 10-K or 20-F annual report that is incorporated by reference into those Securities Act registration statements.

691 *See* Form 20-F, General Instruction B(d) (stating that Regulation S-X applies to the presentation of financial information in the form). Although Item 17 and 18 of Form 20-F, and the forms that refer to Form 20-F (including Forms F-1 and F-3) permit a foreign private issuer to file financial statements prepared in accordance with IFRS as issued by the IASB, the proposed Article 14 disclosure would nevertheless be required (similar to disclosure required by Article 12 of Regulation S-X). *See Acceptance from Foreign Private Issuers of Financial Statements Prepared in Accordance with International Financial Reporting Standards Without Reconciliation to U.S. GAAP*, Rel. No. 33-8879 (Dec. 21, 2007) [73 FR 986 (Jan. 4, 2008)], 999, n.136 (stating that "Regulation S–X will continue to apply to the filings of all foreign private issuers, including those who file financial statements prepared using IFRS as issued by the IASB," but providing that such issuers "will comply with IASB requirements for form and content within the financial statements, rather than with the specific presentation and disclosure provisions in Articles 4, 5, 6, 7, 9, and 10 of Regulation S-X").

disclose any material change to the climate-related disclosure provided in a registration statement or annual report in its Form 10-Q (or, in certain circumstances, Form 6-K for a registrant that is a foreign private issuer that does not report on domestic forms).[692]

The proposed rules would amend Form 20-F and the Securities Act forms that a foreign private issuer may use to register the offer and sale of securities under the Securities Act to require the same climate-related disclosures as proposed for a domestic registrant.[693] Because climate-related risks potentially impact both domestic and foreign private issuers, regardless of the registrant's jurisdiction of origin or organization, requiring that foreign private issuers provide this disclosure would be important to achieving our goal of more consistent, reliable, and comparable information across registrants. Moreover, we note that Form 20-F imposes substantially similar disclosure requirements as those required for Form 10-K filers on matters, such as risk factors and MD&A, that are similar and relevant to the proposed climate-related disclosures.[694]

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[692] Form 6-K is the form furnished by a foreign private issuer with an Exchange Act reporting obligation if the issuer: (i) makes or is required to make the information public pursuant to the law of the jurisdiction of its domicile or in which it is incorporated or organized, or (ii) files or is required to file the information with a stock exchange on which its securities are traded and which was made public by that exchange, or (iii) distributes or is required to distribute the information to its security holders. *See* General Instruction B to Form 6-K. That instruction currently list certain types of information that are required to be furnished pursuant to subparagraphs (i), (ii), and (iii), above. While we are proposing to amend Form 6-K to add climate-related disclosure to the list of the types of information to be provided on Form 6-K, a foreign private issuer would not be required to provide the climate-related disclosure if such disclosure is not required to be furnished pursuant to subparagraphs (i), (ii), or (iii) of General Instruction B.

[693] *See* proposed Item 3.E to Form 20-F.

[694] For similar reasons, we believe that requiring the proposed climate disclosures on Forms F-1, F-3, and F-4 is appropriate because those forms either require the disclosure pursuant to certain parts of Form 20-F (Forms F-1 and F-4) and certain items, such as risk factors, under Regulation S-K, or permit the incorporation by reference of Form 20-F (Forms F-3 and F-4) and therefore require disclosure similar to the domestic forms.

We are not proposing generally to exempt SRCs, EGCs,[695] or registrants that are foreign private issuers from the entire scope of the proposed climate-related disclosure rules because we agree with commenters who stated that, because of their broad impact across industries and jurisdictions, climate-related risks may pose a significant risk to the operations and financial condition of domestic and foreign issuers, both large and small.[696] While we are not proposing to exempt SRCs from the full scope of the proposed climate-related disclosure rules, we are proposing to exempt SRCs from the proposed Scope 3 emissions disclosure requirement.[697] We also are proposing to provide a longer transition period for SRCs to comply with the proposed rules than we are proposing for other registrants.[698] The proposed accommodations for Scope 3 emissions disclosures could mitigate the proposed rules' compliance burden for smaller registrants that, when compared to larger registrants with more resources, may be less able to afford the fixed costs associated with the reporting of GHG emissions. In addition, the extended compliance period would give SRCs additional time to allocate the resources necessary to compile and prepare their climate-related disclosures.

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[695] An emerging growth company ("EGC") is a registrant that had total annual gross revenues of less than \$1.07 billion during its most recently completed fiscal year and has not met the specified conditions for no longer being considered an EGC. *See* 17 CFR 230.405; 17 CFR 240.12b-2; 15 U.S.C. 77b(a)(19); 15 U.S.C. 78c(a)(80); and *Inflation Adjustments and Other Technical Amendments under Titles I and II of the JOBS Act*, Release No. 33- 10332 (Mar. 31, 2017) [82 FR 17545 (Apr. 12, 2017)].

[696] *See, e.g.*, letters from Rob Bonta, California Attorney General *et al*.; Ceres *et al*.; and Natural Resources Defense Council.

[697] *See* proposed 17 CFR 229.1504(c)(3). In this regard we note that participants in the Commission-hosted 2021 Small Business Forum recommended that the Commission provide exemptions or scaled requirements for small and medium-sized companies in connection with any new ESG disclosure requirements adopted by the Commission. *See* Report on the 40th Annual Small Business Forum (May 2021), available at https://www.sec.gov/files/2021_OASB_Annual_Forum_Report_FINAL_508.pdf. *See also* Office of the Advocate for Small Business Capital Formation, *Annual Report for Fiscal Year 2021* (supporting "efforts to continue tailoring the disclosure and reporting framework to the complexity and size of operations of companies, either by scaling obligations or delaying compliance for the smallest of the public companies, particularly as it pertains to potential new or expanded disclosure requirements").

[698] *See infra* Section II.M.

Request for Comment

175. Should the proposed climate-related disclosures be required in Exchange Act reports and registration statements, as proposed? Should we exempt SRCs from all of the proposed climate-related disclosure rules instead of exempting them solely from Scope 3 emissions disclosure requirements, as proposed? Should we exempt SRCs from certain other proposed climate-related disclosure requirements and, if so, which requirements? For example, in addition to the proposed exemption from Scope 3 emissions disclosure, should we exempt SRCs from the proposed requirement to disclose Scopes 1 and 2 emissions? Are there certain types of other registrants, such as EGCs or business development companies ("BDCs"),[699] that should be excluded from all or some of the proposed climate-related disclosure rules?

176. Should we require foreign private issuers that report on Form 20-F to provide the same climate-related disclosures as Form 10-K filers, as proposed? Should we require climate-related disclosures in the registration statements available for foreign private issuers, as proposed? If not, how should the climate-related disclosures provided by foreign private issuer registrants differ from the disclosures provided by domestic registrants?

177. Should we require a registrant to disclose any material changes to the climate-related disclosure provided in its registration statement or annual report in its Form 10-Q or Form 6-K, as proposed? Are there any changes that should be required to be reported on Form 8-K?

178. Should we require the climate-related disclosure in the forms specified above? Is the application of the proposed rules to the forms sufficiently clear, or should we include additional

[699] A BDC is a closed-end investment company that has a class of its equity securities registered under, or has filed a registration statement pursuant to, Section 12 of the Exchange Act, and elects to be regulated as a business development company. *See* Section 54 of the Investment Company Act, 15 U.S.C. 80a-53. Like other Section 12 registrants, BDCs are required to file Exchange Act annual reports.

clarifying amendments? For example, would the application of proposed Article 14 to Forms 20-F, F-1 and F-3 be sufficiently clear when a registrant prepares its financial statements pursuant to IFRS as issued by the International Accounting Standards Board ("IASB") without reconciliation to U.S. generally accepted accounting principles ("U.S. GAAP"), or should we add a related instruction to those forms?

179. Are there certain registration statements or annual reports that should be excluded from the scope of the proposed climate-related disclosure rules? For example, should we exclude Securities Act registration statements filed in connection with a registrant's initial public offering? Would such an accommodation help address concerns about the burdens of transitioning to public company status? We have not proposed to require climate-related disclosures in registration statements on Form S-8 or annual reports on Form 11-K. Should we require such disclosures?

180. Should we require climate-related disclosure in Forms S-4 and F-4, as proposed? Should we provide transitional relief for recently acquired companies? For example, should we provide that a registrant would not be required to provide the proposed climate-related disclosures for a company that is a target of a proposed acquisition under Form S-4 or F-4 until the fiscal year following the year of the acquisition if the target company is not an Exchange Act reporting company and is not the subject of foreign climate-related disclosure requirements that are substantially similar to the Commission's proposed requirements? Should such transitional relief in this instance be for a longer period than one year and, if so, for how long should such transitional relief extend?

181. We have not proposed to amend Form 40-F, the Exchange Act form used by a Canadian issuer eligible to report under the Multijurisdictional Disclosure System ("MJDS") to

register securities or to file its annual report under the Exchange Act, to include the proposed climate-related disclosure requirements. Should we require a Form 40-F issuer to comply with the Commission's proposed climate-related disclosure requirements? Should we permit a MJDS issuer to comply with Canadian climate-related disclosure requirements instead of the proposed rules if they meet certain conditions or provide certain additional disclosures and, if so, which conditions or disclosures?

182. The proposed rules would not apply to asset-backed issuers. The Commission and staff are continuing to evaluate climate-related disclosures with respect to asset-backed securities. Should we require asset-backed issuers to provide some or all of the disclosures under proposed Subpart 1500 of Regulation S-K? If so, which of the proposed disclosures should apply to asset-backed issuers? Are other types of climate disclosure better suited to asset-backed issuers? How can climate disclosure best be tailored to various asset classes?

183. Should we adopt an alternative reporting provision that would permit a registrant that is a foreign private issuer and subject to the climate-related disclosure requirements of an alternative reporting regime that has been deemed by the Commission to be substantially similar to the requirements of proposed Subpart 1500 of Regulation S-K and Article 14 of Regulation S-X to satisfy its disclosure obligations under those provisions by complying with the reporting requirements of the alternative reporting regime ("alternative reporting provision")? If so, should we require the submission of an application for recognition of an alternative reporting regime as having substantially similar requirements for purposes of alternative reporting regarding climate-related disclosures? Should we permit companies, governments, industry groups, or climate-related associations to file such an application? Should we require the applicant to follow certain procedures, such as those set forth in 17 CFR 240.0-13?

184. If we adopt an alternative reporting provision, should we specify certain minimum standards that the alternative reporting regime must meet in order to be recognized and, if so, what standards? For example, should we specify that an alternative reporting regime must require the disclosure of a foreign private issuer's Scopes 1 and 2 emissions and related targets, the proposed financial statement metrics, as well as disclosures pursuant to the TCFD's recommendations regarding governance, strategy, and risk management disclosure? Should we specify that the alternative reporting regime must require the disclosure of Scope 3 emissions and, if so, should we deem the alternative reporting regime to be substantially similar even if its Scope 3 emissions requirements become effective after the Commission's phase in period for Scope 3 emissions disclosure requirements? Should we specify that the alternative reporting regime must require the disclosure of scenario analysis if a registrant uses scenario analysis in formulating its strategy regarding climate-related risks? Are there certain climate-related disclosure requirements that have been adopted or are in the process of being adopted in other jurisdictions that we should consider to be substantially similar to the Commission's rules for purposes of an alternative reporting provision? If so, which requirements should we consider?

185. If we adopt an alternative reporting provision, should it be a mutual recognition system, so that, as a condition of our recognition of a particular jurisdiction as an alternative reporting regime, that jurisdiction must recognize the Commission's climate-related disclosure rules as an alternative reporting system that a registrant dual-listed in the United States and the other jurisdiction may use to fulfill the foreign jurisdiction's climate-related disclosure rules?

186. If we adopt an alternative reporting provision, should we require a registrant filing the alternative climate-related disclosure to make certain changes that we deem necessary as a condition to alternative reporting? For example, should we require a registrant to comply with

XBRL tagging requirements as a condition to filing alternative climate-related disclosure? Are there other specific conditions that we should impose on disclosure under an alternative climate reporting provision?

187. If we adopt an alternative reporting provision, should we require a registrant using that system to:

- State in the filing that it is relying on this alternative reporting provision;
- Identify the alternative reporting regime for which the climate-related disclosure was prepared;
- Identify the exhibit number of the filing where the alternative disclosure can be found; and
- File a fair and accurate English translation of the alternative climate-related disclosure if in a foreign language?

Would these requirements enhance the accessibility of the alternative disclosures? Are there other requirements that we should impose to enhance the transparency of the alternative climate-related disclosure?

188. If we adopt an alternative reporting provision, should we permit a registrant to follow the submission deadline of the approved alternative reporting regime even if that deadline differs from the deadline for reporting under our rules? If so, what conditions, if any, should apply to permit the use of such alternative deadline? For example, should the registrant be required to provide adequate notice, before the due date of the Commission filing in which the alternative disclosure is required to be included? Should such notice indicate the registrant's intent to file the alternative disclosure using the alternative jurisdiction's deadline? If so, what would constitute adequate notice? For example, should the deadline for filing the notice be three, five,

or ten business days before the Commission filing deadline? Should we permit a registrant to provide such notice through an appropriate submission to the Commission's EDGAR system? Should we permit a registrant to indicate in its Form 20-F or other report that it will file the alternative disclosure at a later date if permitted to do so by the alternative reporting regime? In that case, should we permit the registrant to file the alternative disclosure on a Form 6-K or 8-K? Should we instead require a registrant to submit the notice via a form that we would create for such purpose? Should there be any consequences if a registrant fails to file a timely notice or fails to file the alternative disclosure by the alternative regime's due date? For example, should we preclude such a registrant from relying on the alternative reporting provision for the following fiscal year?

189. An International Sustainability Standards Board (ISSB) has recently been created, which is expected to issue global sustainability standards, including climate-related disclosure standards.[700] If we adopt an alternative reporting provision, should that provision be structured to encompass reports made pursuant to criteria developed by a global sustainability standards body, such as the ISSB? If so, should such alternative reporting be limited to foreign private issuers, or should we extend this option to all registrants? What conditions, if any, should we place on a registrant's use of alternative reporting provisions based on the ISSB or a similar body?

K. Structured Data Requirement

The proposed rules would require a registrant to tag the proposed climate-related disclosures in a structured, machine-readable data language.[701] Specifically, the proposed rules

[700] *See supra* note 92.

[701] *See* proposed 17 CFR 229.1507.

would require a registrant to tag climate-related disclosures in Inline eXtensible Business Reporting Language ("Inline XBRL") in accordance with 17 CFR 232.405 (Rule 405 of Regulation S-T) and the EDGAR Filer Manual. The proposed requirements would include block text tagging and detail tagging of narrative and quantitative disclosures provided pursuant to Subpart 1500 of Regulation S-K and Article 14 of Regulation S-X.[702]

In 2009, the Commission adopted rules requiring operating companies to submit the information from the financial statements (including footnotes and schedules thereto) included in certain registration statements and periodic and current reports in a structured, machine-readable data language using eXtensible Business Reporting Language ("XBRL").[703] In 2018, the Commission adopted modifications to these requirements by requiring issuers to use Inline XBRL, which is both machine-readable and human-readable, to reduce the time and effort associated with preparing XBRL filings and improve the quality and usability of XBRL data for

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[702] For the proposed Subpart 1500 disclosures, this tagging requirement would be implemented by including a cross-reference to Rule 405 of Regulation S-T in proposed Item 1507 of Regulation S-K, and by revising Rule 405(b) of Regulation S-T to include the proposed climate-related disclosures required by Subpart 1500 of Regulation S-K. The proposed Article 14 of Regulation S-X disclosures would be subject to existing requirements in Rule 405(b) to tag information in financial statements (including footnotes). Pursuant to Rule 301 of Regulation S-T the EDGAR Filer Manual is incorporated by reference into the Commission's rules. In conjunction with the EDGAR Filer Manual, Regulation S-T governs the electronic submission of documents filed with the Commission. Rule 405 of Regulation S-T specifically governs the scope and manner of disclosure tagging requirements for operating companies and investment companies, including the requirement in Rule 405(a)(3) to use Inline XBRL as the specific structured data language to use for tagging the disclosures.

[703] *Interactive Data to Improve Financial Reporting*, Release No. 33-9002 (Jan. 30, 2009) [74 FR 6776 (Feb. 10, 2009)] ("2009 Financial Statement Information Adopting Release") (requiring submission of an Interactive Data File to the Commission in exhibits to such reports); *see also* Release No. 33-9002A (Apr. 1, 2009) [74 FR 15666 (Apr. 7, 2009)].

investors.[704] In 2020, the Commission adopted Inline XBRL requirements for business development companies that will be effective no later than February 2023.[705]

Requiring Inline XBRL tagging of the proposed climate-related disclosures would benefit investors by making the disclosures more readily available and easily accessible to investors, market participants, and other users for aggregation, comparison, filtering, and other analysis, as compared to requiring a non-machine readable data language such as ASCII or HTML. This would enable automated extraction and analysis of climate-related disclosures, allowing investors and other market participants to more efficiently perform large-scale analysis and comparison of climate-related disclosures across companies and time periods. At the same time, we do not expect the incremental compliance burden associated with tagging the additional information to be unduly burdensome, because issuers subject to the proposed requirements are or in the near future will be subject to similar Inline XBRL requirements in other Commission filings.[706]

Request for Comment

190. Should we require registrants to tag the climate-related disclosures, including block text tagging and detail tagging of narrative and quantitative disclosures required by Subpart 1500 of Regulation S-K and Article 14 of Regulation S-X in Inline XBRL, as proposed? Should we permit custom tags for the climate-related disclosures?

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704 *Inline XBRL Filing of Tagged Data*, Release No. 33-10514 (June 28, 2018) [83 FR 40846, 40847 (Aug. 16, 2018)]. Inline XBRL allows filers to embed XBRL data directly into an HTML document, eliminating the need to tag a copy of the information in a separate XBRL exhibit. *Id.* at 40851.

705 *Securities Offering Reform for Closed-End Investment Companies*, Release No. 33-10771 (Apr. 8, 2020) [85 FR 33290 (June 1, 2020) at 33318].

706 *See supra* notes 704 and 705. Inline XBRL requirements for business development companies will take effect beginning Aug. 1, 2022 (for seasoned issuers) and Feb. 1, 2023 (for all other issuers). *See id.* If the proposed Inline XBRL requirements are adopted in the interim, they will not apply to business development companies prior to the aforementioned effectiveness dates.

191. Should we modify the scope of the proposed climate-related disclosures required to be tagged? For example, should we only require tagging of the quantitative climate-related metrics?

192. Are there any third-party taxonomies the Commission should look to in connection with the proposed tagging requirements?

193. Should we require issuers to use a different structured data language to tag climate-related disclosures? If so, what structured data language should we require? Should we leave the structured data language undefined?

L. Treatment for Purposes of Securities Act and Exchange Act

We are proposing to treat the proposed required climate-related disclosures as "filed" and therefore subject to potential liability under Exchange Act Section 18,[707] except for disclosures furnished on Form 6-K. The proposed filed climate-related disclosures would also be subject to potential Section 11 liability[708] if included in or incorporated by reference into a Securities Act registration statement. This treatment would apply both to the disclosures in response to proposed subpart 1500 of Regulation S-K and to proposed Article 14 of Regulation S-X.

Form 6-K disclosures would not be treated as "filed" because the form, by its own terms, states that "information and documents furnished in this report shall not be deemed to be "filed" for the purposes of Section 18 of the Act or otherwise subject to the liabilities of that section."[709]

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[707] 15 U.S.C. 78r.

[708] 15 U.S.C. 77k.

[709] Form 6-K, General Instruction B.

The treatment of disclosures on Form 6-K as furnished is a long-standing part of our foreign private issuer disclosure system.[710]

Commenters expressed differing views on whether we should treat Commission-mandated climate-related disclosures as filed or furnished. Many commenters recommended that we treat such climate-related disclosures as filed.[711] Some of these commenters stated that we should treat climate-related disclosures like financial disclosures and require them to be filed together with the rest of the Commission filing.[712] Other commenters indicated that the treatment of climate-related disclosures as filed would help ensure that investors have confidence in the accuracy and completeness of such disclosures because of the liability associated with filed documents.[713]

Other commenters recommended that we treat climate-related disclosures as furnished.[714] Some of these commenters stated that the Commission's treatment of such disclosures as filed

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710 *See* Release No. 34-8069 (Apr. 28, 1967), [32 FR 7853 (May 30, 1967)]. Form 6-K's treatment as furnished for purposes of Section 18 has existed since the Commission adopted the form.

711 *See, e.g.*, letters from Baillie Gifford; Rob Bonta, California Attorney General *et al*.; Calvert Research and Management; Carolyn Kohoot; Center for American Progress; Ceres *et al*.; Certified B Corporations; Clean Yield Asset Management; Climate Risk Disclosure Lab; Consumer Federation of America; Environmental Bankers Association; Friends of the Earth, Amazon Watch, and Rainforest Action Network; Garcia Hamilton & Associates (June 11, 2021); Grant Thornton; Sarah Ladin; Miller/Howard Investments; Natural Resources Defense Council; New York State Society of Certified Public Accountants; Nia Impact Capital; Teachers Insurance and Annuity Association of America; ValueEdge Advisors (July 5, 2021); and Vert Asset Management.

712 *See, e.g.*, letters from Rob Bonta, California Attorney General *et al*.; Calvert Research and Management; and Ceres *et al*.

713 *See, e.g.*, letters from Consumer Federation of America; and Natural Resources Defense Council.

714 *See, e.g.*, letters from American Petroleum Institute; Associated General Contractors of America; Bank Policy Institute; Business Roundtable; Chamber of Commerce; Chevron; Cisco; ConocoPhilips; Dell Technologies; Dow; FedEx Corporation (June 11, 2021); Investment Company Institute; NACCO Industries, Inc. (June 11,

could act as a disincentive to providing "broader" disclosure and would incentivize some issuers "to disclose in the manner most limited to meet the specific requirement and avoid more robust explanation."[715] Other commenters stated that the treatment of climate-related disclosures as furnished would be appropriate because, in their view, much of that disclosure is based on projections and aspirational statements ill-suited to the application of a stricter liability standard.[716]

We agree with those commenters who indicated that the treatment of climate-related disclosures as filed could help promote the accuracy and reliability of such disclosures for the benefit of investors.[717] In this regard, we believe these disclosures should be subject to the same liability as other important business or financial information that the registrant includes in its registration statements and periodic reports. While we acknowledge commenters who stated that the methodology underlying climate data continues to evolve,[718] we intend to provide registrants with an ample transition period to prepare to provide such disclosure.[719] Further, much of the disclosure proposed to be required reflects discussion of a company's own climate risk assessment and strategy, which is not dependent on external sources of information. In addition, we have provided guidance and proposed rules on the applicability of safe harbors to certain disclosures under the proposed rules. For these reasons, we believe it would be appropriate for

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2021); KPMG, LLP; National Association of Manufacturers; National Investor Relations Institute; National Mining Association; Society for Corporate Governance; and United Airlines Holdings, Inc.

715 Letter from American Petroleum Institute; *see also* letters from Chamber of Commerce; and National Association of Manufacturers.

716 *See, e.g.*, letters from National Mining Association; and United Airlines Holdings.

717 *See supra* note 713.

718 *See, e.g.*, letter from National Association of Manufacturers.

719 *See infra* Section II.M.

the proposed disclosures to be filed rather than furnished, except with respect to the proposed disclosure we are requiring on Form 6-K.

Request for Comment

194. Should we treat the climate-related disclosures required by proposed subpart 1500 of Regulation S-K and proposed Article 14 of Regulation S-X as filed for purposes of potential liability under the Securities Act and Exchange Act, except for the climate disclosures on Form 6-K, as proposed? Should we instead treat the climate-related disclosures required by both proposed subpart 1500 of Regulation S-K and proposed Article 14 of Regulation S-X as furnished? Are there reasons why the proposed climate-related disclosures should not be subject to Section 18 liability?

195. Should we only treat the climate-related disclosures required by proposed subpart 1500 of Regulation S-K as filed? Should we only treat the climate-related disclosures required by proposed Article 14 of Regulation S-X as filed? Is there some other subset of climate-related disclosures that should be treated as furnished rather than filed? For example, should we only treat as filed disclosures related to a registrant's Scopes 1 and 2 emissions, and treat a registrant's Scope 3 emissions as furnished?

196. Should we treat the climate disclosures on Form 6-K as filed?

M. Compliance Date

We recognize that many registrants may require time to establish the necessary systems, controls, and procedures to comply with the proposed climate-related disclosure requirements. In addition, some commenters recommended that the Commission not adopt a "one size fits all" approach when promulgating climate-related disclosure rules because such an approach would disproportionately impact smaller registrants.[720] In order to provide registrants, especially smaller registrants, with additional time to prepare for the proposed climate-related disclosures, we are proposing phased-in dates for complying with proposed subpart 1500 of Regulation S-K and Article 14 of Regulation S-X, which would provide additional time for certain smaller registrants. The table below summarizes the proposed phase-ins for the compliance date. The table assumes, for illustrative purposes, that the proposed rules will be adopted with an effective date in December 2022, and that the registrant has a December 31st fiscal year-end.

Registrant Type	**Disclosure Compliance Date**		**Financial Statement Metrics Audit Compliance Date**
	All proposed disclosures, including GHG emissions metrics: Scope 1, Scope 2, and associated intensity metric, but excluding Scope 3.	GHG emissions metrics: Scope 3 and associated intensity metric	
Large Accelerated Filer	Fiscal year 2023 (filed in 2024)	Fiscal year 2024 (filed in 2025)	Same as disclosure compliance date
Accelerated Filer and Non-Accelerated Filer	Fiscal year 2024 (filed in 2025)	Fiscal year 2025 (filed in 2026)	
SRC	Fiscal year 2025 (filed in 2026)	Exempted	

The proposed compliance dates in the table above would apply to both annual reports and registration statements. For example, if a non-accelerated filer with a December 31st fiscal year-end filed a registration statement that was not required to include audited financial statements for fiscal year 2024 (*e.g.*, the registration statement was filed in 2023 or 2024), it would not be required to comply with the proposed climate disclosure rules in that registration statement.

[720] *See supra* note 556.

A registrant with a different fiscal year-end date that results in its fiscal year 2023 commencing before the effective date of the rules would not be required to comply with subpart 1500 of Regulation S-K and Article 14 of Regulation S-X until the following fiscal year. For example, a large accelerated filer with a March 31st fiscal year-end date would not be required to comply with the proposed climate disclosure rules until its Form 10-K for fiscal year 2024, filed in June, 2024. This would provide large accelerated filers, who would have the earliest compliance date of all categories of filers, with what we believe is a reasonable amount of time to comply with the rules.

We believe that initially applying the disclosure requirements to the more limited pool of large accelerated filers would be appropriate, because many large accelerated filers are already collecting and disclosing climate-related information, have already devoted resources to these efforts, and have some levels of controls and processes in place for such disclosure.[721] In comparison, registrants that are not large accelerated filers may need more time to develop the systems, controls, and processes necessary to comply with the proposed rules, and may face proportionately higher costs. Accordingly, we propose to provide them additional time to comply.

We also recognize that obtaining the data necessary to calculate a registrant's Scope 3 emissions might prove challenging since much of the data is likely to be under the control of third parties. In order to provide sufficient time for registrants to make the necessary

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[721] *See, e.g.*, letters from Adobe; Apple; BNP Paribas; bp; Chevron; Eni SpA; and Walmart.

arrangements to begin gathering and assessing such data, we are proposing an additional one-year phase-in period for the Scope 3 emissions disclosure requirements. As previously mentioned, we also are proposing an exemption for SRCs from the proposed Scope 3 emissions disclosure provision.[722]

The proposed mandatory compliance periods are intended to provide registrants with ample time to prepare to provide the proposed disclosures. Registrants would, however, be able to provide the disclosures at any time after the effective date of the rules.

Request for Comment

197. Should we provide different compliance dates for large accelerated filers, accelerated filers, non-accelerated filers, or SRCs, as proposed? Should any of the proposed compliance dates in the table above be earlier or later? Should any of the compliance dates be earlier so that, for example, a registrant would be required to comply with the Commission's climate-related disclosure rules for the fiscal year in which the rules become effective?

198. Should we provide a compliance date for the proposed Scope 3 emissions disclosure requirements that is one year later than for the other disclosure requirements, as proposed? Should the compliance dates for the Scope 3 emissions disclosure requirements be earlier or later? Should the compliance date for the Scope 3 emissions disclosure requirements depend upon whether the registrant is a large accelerated filer, accelerated filer, or non-accelerated filer?

199. Should we provide different compliance dates for registrants that do not have a December 31st fiscal year-end?

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[722] *See supra* Section II.G.3.

200. Should we include rules or guidance addressing less common situations, such as, but not limited to, reverse mergers, recapitalizations, other acquisition transactions, or if a registrant's SRC (or EGC) status changes as a result of such situations?

201. Are there other phase-ins or exemptions regarding any or all of the proposed rules that we should provide?

III. GENERAL REQUEST FOR COMMENTS

We request and encourage any interested person to submit comments on any aspect of the proposed amendments, other matters that might have an impact on the proposed amendments, and any suggestions for additional changes. With respect to any comments, we note that they are of greatest assistance to our rulemaking initiative if accompanied by supporting data and analysis of the issues addressed in those comments and by alternatives to our proposals where appropriate.

IV. ECONOMIC ANALYSIS

We are mindful of the economic effects that may result from the proposed rules, including the benefits, costs, and the effects on efficiency, competition, and capital formation. [723] This section analyzes the expected economic effects of the proposed rules relative to the current baseline, which consists of the regulatory framework of disclosure requirements in existence

[723] Section 2(b) of the Securities Act, 15 U.S.C. 77b (b), and Section 3(f) of the Exchange Act, 17 U.S.C. 78c(f), require the Commission, when engaging in rulemaking where it is required to consider or determine whether an action is necessary or appropriate in the public interest, to consider, in addition to the protection of investors, whether the action will promote efficiency, competition, and capital formation. Further, Section 23(a)(2) of the Exchange Act, 17 U.S.C. 78w(a)(2), requires the Commission, when making rules under the Exchange Act, to consider the impact that the rules would have on competition, and prohibits the Commission from adopting any rule that would impose a burden on competition not necessary or appropriate in furtherance of the Exchange Act.

today, the current disclosure practices of registrants, and the use of such disclosures by investors and other market participants.

We anticipate the proposed rules will give rise to several benefits by strengthening investor protection, improving market efficiency, and facilitating capital formation. The primary benefit is that investors would have access to more consistent, comparable, and reliable disclosures with respect to registrants' climate-related risks, which is expected to enable investors to make more informed investment or voting decisions.[724] By providing access to this information through SEC filings for all public issuers, this enhanced disclosure could mitigate the challenges that investors currently confront in assessing the nature and extent of the climate-related risks faced by registrants and their impact on registrants' business operations and financial condition. In this way, the proposed rules may reduce information asymmetry both among investors, which can reduce adverse selection problems and improve stock liquidity,[725] and between investors and firms, which can reduce investors' uncertainty about estimated future cash flows, thus lowering the risk premium they demand and therefore registrant's cost of capital. The proposed rules could also mitigate certain agency problems between the firm's shareholders and management, thus strengthening investor protection.[726] Further, by enabling climate-related information to be more fully incorporated into asset prices, the proposed rules would allow climate-related risks to be borne by those who are most willing and able to bear

[724] *See infra* Section IV.C.1.

[725] *Id*.

[726] *Id*.

them, thereby strengthening financial system resilience. Taken together, the proposed rules are expected to contribute to the efficient allocation of capital, capital formation, competition, and the maintenance of fair and orderly markets.[727]

We are also mindful of the costs that would be imposed by the proposed rules. Registrants would face increased compliance burdens in meeting the new disclosure requirements. In some cases, these additional compliance burdens could be significant while in others relatively small if companies already provide information similar to that required by our rules. Other potential costs include increased litigation risk and the potential disclosure of proprietary information about firms' operations and/or production processes.[728]

A. Baseline and Affected Parties

This section describes the current regulatory and economic landscape with respect to climate-related disclosures. It discusses the parties likely to be affected by the proposed rules, current trends in registrants' voluntary reporting on climate risks, related assurance practices, and existing mandatory disclosure rules under state and other Federal laws. These factors form the baseline against which we estimate the likely economic effects of the proposed rules.

1. Affected Parties

The proposed disclosure requirements would apply to Forms S-1, F-1, S-3, F-3, S-4, F-4, S-11, 6-K, 10, 10-Q, 10-K, and 20-F. Thus, the parties that are likely affected by the proposed rules include registrants subject to the disclosure requirements imposed by these forms, as well

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727 *See infra* Section IV.D.

728 *See infra* Section IV.C.2

as investors and other market participants that use the information in these filings (e.g. financial analysts, investment advisors, asset managers, etc.).

The proposed rules may affect both domestic registrants and foreign private issuers (FPIs).[729] We estimate that during calendar year 2020, excluding registered investment companies, there were approximately 6,220 registrants that filed on domestic forms[730] and approximately 740 FPIs that filed on Forms 20-F. Among the registrants that filed on domestic forms, approximately 31 percent were large accelerated filers, 11 percent were accelerated filers, and 58 percent were non-accelerated filers. In addition, we estimate that approximately 50 percent of these domestic registrants were smaller reporting companies (SRCs) and 22 percent were emerging growth companies (EGCs).

2. Current Regulatory Framework

A number of the Commission's existing disclosure requirements may elicit disclosure about climate-related risks; however, many of these requirements are principles-based in nature and thus the nature and extent of the information provided depends to an extent on the judgment

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[729] FPIs refer to the subset of all FPIs that file annual reports on Form 20-F, excluding MJDS filers using form 40-F.The number of domestic registrants and FPIs affected by the final amendments is estimated as the number of unique companies, identified by Central Index Key (CIK), that filed a Form 10-K, Form 20-F, or an amendment thereto, or both a Form 10-Q and a Form S-1, S-3, S-4, or S-11 with the Commission during calendar year 2020, excluding asset-backed securities issuers. For purposes of this economic analysis, these estimates do not include registrants that only filed a Securities Act registration statement during calendar year 2020, or only filed a Form 10-Q not preceded by a Securities Act registration statement (in order to avoid including entities such as certain co-issuers of debt securities). We believe that most registrants that have filed a Securities Act registration statement or a Form 10-Q not preceded by a Securities Act registration statement, other than such co-issuers, would be captured by this estimate. The estimates for the percentages of SRCs, EGCs, accelerated filers, large accelerated filers, and non-accelerated filers are based on data obtained by Commission staff using a computer program that analyzes SEC filings, with supplemental data from Ives Group Audit Analytics and manual review of filings by staff.

[730] This number includes approximately 20 FPIs that filed on domestic forms in 2020 and approximately 90 BDCs.

of management. As discussed above, in 2010, the Commission published interpretive guidance on existing disclosure requirements as they pertain to business or legal developments related to climate change.[731] The 2010 Guidance emphasized that if climate-related factors have a material impact on a firm's financial condition, disclosure may be required under current Item 101 (Description of Business), Item 103 (Legal Proceedings), Item 105 (Risk Factors), or Item 303 (MD&A) of Regulation S-K. While these provisions may elicit some useful climate-related disclosure, these provisions have not resulted in the consistent and comparable information about climate-related risks that many investors have stated that they need in order to make informed investment or voting decisions.[732]

3. Existing State and Federal Laws

There are also state and other Federal laws that require certain climate-related disclosures or reporting. For instance, there are requirements for mandatory climate risk disclosure within the insurance industry. As of 2021, 14 states[733] and the District of Columbia require any domestic insurers that write more than $100 million in annual net written premium[734] to disclose

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731 *See Commission Guidance Regarding Disclosure Related to Climate Change*, Release No. 33-9106 (Feb. 2, 2010) [75 FR 6290 (Feb, 8, 2010)] ("2010 Climate Change Guidance"), *available at* https://www.sec.gov/rules/interp/2010/33-9106.pdf (The guidance did not create new legal requirements nor modify existing ones. Instead, it highlighted climate-related topics that registrants should consider in seeking to meet their existing disclosure obligations (e.g. the impact of legislation, regulation, international accords, indirect consequences, physical risks, etc.) and in what section they should be discussed (e.g. risk factors, MD&A, etc.)). *See* also discussion in Section I.A.

732 *See* Section I.B.

733 The 14 states are California, Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington.

734 Net written premium is defined as the premiums written by an insurance company, minus premiums paid to reinsurance companies, plus any reinsurance assumed.

their climate-related risk assessment and strategy via the NAIC Climate Risk Disclosure Survey.[735] Survey question topics include climate risk governance, climate risk management, modeling and analytics, stakeholder engagement, and greenhouse gas management. In fiscal year 2020, there were 66 publicly traded insurance companies that may be required to provide disclosure pursuant to these state law provisions and that also would be subject to the proposed rules.

There also exist Federal- and state-level reporting requirements related to greenhouse gas (GHG) emissions. Federal GHG reporting requirements consist of the U.S. Environmental Protection Agency's (EPA) 2009 Mandatory Reporting of Greenhouse Gases Rule.[736] This rule requires large direct emitters and suppliers of fossil fuels to report their emissions to the EPA.[737] Specifically, the rule requires each facility that directly emits more than 25,000 metric tons of CO_2e per year to report these direct emissions. Additionally, facilities that supply certain products that would result in over 25,000 metric tons of CO_2e if those products were released,

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[735] *See* NAIC, *Assessments of and Insights from NAIC Climate Risk Disclosure Data* (Nov. 2020), *available at* https://content.naic.org/article/news_release_naic_assesses_provides_insight_insurer_climate_risk_disclosure_survey_data.htm.

[736] *See* 40 CFR Part 98 (2022); see also EPA, *EPA Fact Sheet: Greenhouse Gases Reporting Program Implementation* (2013), *available at* https://www.epa.gov/sites/default/files/2014-09/documents/ghgrp-overview-factsheet.pdf.

[737] According to the EPA, "direct emitters" are facilities that combust fuels or otherwise put GHGs into the atmosphere directly from their facility. An example of this is a power plant that burns coal or natural gas and emits carbon dioxide directly into the atmosphere. The EPA estimates that the GHGRP data reported by direct emitters covers about half of total U.S. emissions. "Suppliers" are those entities that supply products into the economy which if combusted, released or oxidized emit greenhouse gases into the atmosphere. These fuels and industrial gases are not emitted from the supplier facility but instead distributed throughout the country and used. An example of this is gasoline, which is sold in the U.S. and primarily burned in cars throughout the country. The majority of GHG emissions associated with the transportation, residential and commercial sectors are accounted for by these suppliers.

combusted, or oxidized must similarly report these "supplied" emissions.[738] The resulting emissions data are then made public through their website.

Due to the nature of the EPA's reporting requirements, their emissions data does not allow a clean disaggregation across the different scopes of emissions for a given registrant. The EPA requires reporting of facility-level direct emissions, which can contribute to a registrant's Scope 1 emissions (but can typically be considered a subset, to the extent that the registrant has other non-reporting facilities), and facility-level supplied emissions, which can contribute to a registrant's Scope 3 emissions (but can also be very different from it).[739] Gases required to be reported by the EPA include all those referenced by the GHG Protocol and included within the proposed definition of "greenhouse gases."[740] The EPA estimates that the required reporting under their rule covers 85-90% of all GHG emissions from over 8,000 facilities in the United States.[741]

In addition, at least 17 states have specific GHG emissions reporting requirements.[742] States' rules vary with respect to reporting thresholds and emissions calculation methodologies,

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738 The EPA's emissions data does not include emissions from agriculture, land use, or direct emissions from sources that have annual emissions of less than 25,000 metric tons of CO2e.

739 On this latest point, in particular, facility-level supplied emissions cannot necessarily be characterized as a portion of the registrant's Scope 3 emission as the boundaries of the entity required to report under the EPA reporting regime (the facility) are different from the boundaries of the entity required to report under our proposed rules (the registrant).

740 The EPA requires emissions reporting only for domestic facilities, while the proposed rule would not be limited to U.S. facilities and includes indirect emissions. The EPA also requires some gases (e.g. fluorinated ethers, perfluoropolyether) that are considered optional under the GHG Protocol and that are not included within the proposed definition of "greenhouse gases."

741 *See supra* note736.

742 *See* NCSL, *Greenhouse Gas Emissions Reduction Targets and Market-Based Policies* (2021), *available at* https://www.ncsl.org/research/energy/greenhouse-gas-emissions-reduction-targets-and-market-based-

but most tend to focus on direct emissions (i.e., Scope 1), with certain exceptions. For example, New York requires the reporting of direct emissions from any owner or operator of a facility that directly emits or has the potential to emit 100 tons per year or more of GHGs, and 100,000 tons per year or more of carbon dioxide equivalent (CO_2e).[743] Colorado excludes oil and gas that is exported out of state, but includes both imported and exported electricity when calculating the state's emissions inventory.[744] California requires annual reporting of GHG emissions by industrial sources that emit more than 10,000 metric tons of CO_2e, transportation and natural gas fuel suppliers, and electricity importers.[745] As a result of these federal and state-level emissions reporting requirements, some registrants affected by the proposed rules may already have in place certain processes and systems to measure and disclose their emissions.

4. International Disclosure Requirements

Issuers with operations abroad may also be subject to those jurisdictions' disclosure requirements. Many jurisdictions' current and/or proposed requirements are based on the TCFD's framework for climate-related financial reporting.[746] In 2015, the Financial Stability

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policies.aspx. The 17 states with GHG reporting requirements are Hawaii, Washington, Oregon, California, Nevada, Colorado, Minnesota, Iowa, Virginia, Pennsylvania, New York, New Jersey, Maryland, Connecticut, Massachusetts, Vermont, and Maine.

743 *See* Air Compliance and Emissions (ACE) Reporting, *available at* https://www.dec.ny.gov/chemical/54266.html.

744 *See* M. Sakas, Colorado Greenhouse Gas Producers Are Now Required To Report Emissions Data To The State, *Colorado Public Radio News* (2020), *available at* https://www.cpr.org/2020/05/22/colorado-greenhouse-gas-producers-are-now-required-to-report-emissions-data-to-the-state.

745 *See* Cal. Air Res. Bd., *Mandatory Greenhouse Gas Reporting 2020 Emissions Year Frequently Asked Questions* (Nov. 4, 2021), *available at* https://www.arb.ca.gov/cc/reporting/ghg-rep/reported-data/2020mrrfaqs.pdf?_ga=2.110314373.182173320.1638196601-1516874544.1627053872.

746 *See* Section I.D.

Board (FSB) established the TCFD, an industry-led task force charged with developing a framework for assessing and disclosing climate-related financial risk. In 2017, the TCFD published disclosure recommendations that provide a framework to evaluate climate-related risks and opportunities through an assessment of their projected short-, medium-, and long-term financial impact on an issuer. The framework establishes eleven disclosure topics related to four pillars that reflect how companies operate: governance, strategy, risk management, and metrics and targets.[747] The TCFD forms the framework for the recently published climate prototype standard that the IFRS Foundation is considering as a potential model for standards by the IFRS Foundation's International Sustainability Standards Board (ISSB). As of September 2021, the TCFD reported that eight jurisdictions have implemented formal TCFD-aligned disclosure requirements for domestic issuers: Brazil, the European Union, Hong Kong, Japan, New Zealand, Singapore, Switzerland, and the United Kingdom.[748] In these jurisdictions, disclosures are already being provided by in-scope issuers or are expected to start between 2022 and 2025. Plans to expand the scope of current requirements have also been announced in several countries,

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747 *See* TCFD, *Overview* (Mar. 2021) ("TCFD_Booklet_FNL_Digital_March-2020"), *available at* https://assets.bbhub.io/company/sites/60/2020/10/TCFD_Booklet_FNL_Digital_March-2020.pdf.

748 *See* TCFD, *2021 Status Report* (Oct. 2021), *available at* https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Status_Report.pdf.

including the United Kingdom,[749] the European Union,[750] and Japan.[751] In addition, several other jurisdictions have proposed TCFD-aligned disclosure requirements, issued policies or guidance in line with the TCFD recommendations, or otherwise indicated support for the TCFD

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[749] For example, the United Kingdom's Financial Conduct Authority (FCA) issued a policy statement in 2021 expanding its TCFD-aligned disclosure requirements to standard issuers and formally incorporating references to the TCFD's Oct. 2021 guidance on metrics, targets and transition plans and updated implementation annex. This policy will apply for accounting periods beginning on or after Jan. 1, 2022. The FCA requirements are currently on a comply-or-explain basis; the FCA has announced that it plans to consult on making these requirements mandatory alongside future proposals adapting the rules to any future ISSB climate standard, once issued. *See* FCA, *PS21/23: Enhancing Climate-Related Disclosures by Standard Listed Companies* (Dec. 2021), available at https://www.fca.org.uk/publication/policy/ps21-23.pdf. In addition, the United Kingdom has adopted TCFD-aligned disclosure requirements for asset managers and certain asset owners, effective Jan. 1, 2022, with certain phase-ins. *See* FCA, *PS21/24: Enhancing Climate-Related Disclosures by Asset Managers, Life Insurers and FCA-Regulated Pension Providers* (Dec. 2021), *available at* https://www.fca.org.uk/publication/policy/ps21-24.pdf.

[750] In the European Union, the European Commission (EC) adopted a proposal for a Corporate Sustainability Reporting Directive (CSRD), which would revise existing company reporting rules and aim to provide more comparable and consistent information to investors. The CSRD proposal enlarges the scope of the reporting requirements and would cover nearly 50,000 companies in the European Union. The CSRD proposal acknowledges the importance of the IFRS' efforts to establish the ISSB and seeks compatibility with the TCFD recommendations, along with other international frameworks. The EC aims to have the new CSRD reporting requirements in place for reporting year 2023. *See Proposal for 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), *available at* https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189. Additionally, the EC is progressing work on reporting standards for meeting the proposed CSRD requirement. The European Financial Reporting Advisory Group ("EFRAG") published a climate standard prototype in Sept. 2021 that is based on the TCFD framework. *See* EFRAG, *Climate Standard Working Paper*, (Sept. 8, 2021), *available at* https://www.efrag.org/News/Project-527/EFRAG-PTF-ESRS-welcomes-Climate-standard-prototype-working-paper?AspxAutoDetectCookieSupport=1.

[751] Japan's Financial Services Agency (FSA) is planning to make it mandatory for large companies to make climate-related disclosures aligned with the TCFD framework from as early as Apr. 2022. In addition, climate disclosures have been part of Japan's corporate governance code since June 2021; however, the code is not legally binding and the disclosures were introduced on a 'comply-or-explain' basis. In Apr. 2022, the Tokyo Stock Exchange (TSE) will be replacing its First and Second sections, the "Mothers" market for startups and the tech-focused JASDAQ, with three new segments: Prime, Standard and Growth. According to Nikkei, companies listed on the Prime market will be required to comply with disclosure requirements aligned with the TCFD recommendations starting in Apr. 2022. *See* Japan's FSA to Mandate Climate Disclosures from Apr. 2022, (Oct. 2021), *available at* https://www.esginvestor.net/japans-fsa-to-mandate-climate-disclosures-from-april-2022/.

recommendations, including Australia, Canada[752], Denmark, France, Ireland, Italy, Malaysia, Norway, Russia and South Korea.[753] Insofar as issuers have operations abroad, they would already be subject to these mandatory disclosure requirements, policies and guidance.

5. Current Market Practices

a. Climate-Related Disclosures in SEC Filings

The Commission's staff reviewed 6,644 annual reports (Forms 10-K, 40-F, and 20-F) submitted from June 27, 2019 until December 31, 2020 to determine how many contain any of the following keywords: "climate change", "climate risk", or "global warming". The presence of any of the keywords in any part of the annual report is indicative of some form of climate-related disclosure.[754] Table 1 (presented as a graph in Figure 1) shows that 33% of all annual reports contain some disclosure related to climate change, with a greater proportion coming from foreign registrants (the corresponding percentages for Forms 20-F and 40-F are 39% and 73%, respectively). Table 2 (presented as a graph in Figure 2) provides a breakdown by accelerated filer status. Among large accelerated filers, 49% of filings discussed climate change, while the figures for accelerated filers and non-accelerated filers are 29% and 17%, respectively. Table 3 (presented as a graph in Figure 3), which provides a breakdown by industry groups, shows that

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[752] The Canadian Securities Administrators (CSA) is considering proposed climate-related disclosure requirements largely consistent with the TCFD recommendations, with a few exceptions. The proposed requirements would elicit disclosure by issuers related to the four pillars of the TCFD recommendations (Governance, Strategy, Risk management, and Metrics and targets). The CSA anticipates that the proposed requirements would come into force in 2022 and would be phased in over one and three year periods. *See* Consultation: Climate -Related Disclosure Update and CSA and Request for Comment, *available at* https://www.osc.ca/sites/default/files/2021-10/csa_20211018_51-107_disclosure-update.pdf.

[753] *See* TCFD 2021 Status Report, *available at* https://assets.bbhub.io/company/sites/60/2021/07/2021-TCFD-Status_Report.pdf.

[754] One limitation of using this keyword search is that it is unable to discern the extent or quality of climate-related disclosures, nor can it determine specific sub-topics within climate-related disclosures. For these reasons, the analysis was supplemented by natural language processing (NLP) analysis, as described later in this section.

the industries with the highest percentage of annual reports containing climate-related disclosure include maritime transportation, electric services, oil and gas, steel manufacturing, and rail transportation, among others.

Table 1. Filings with Climate-related Keywords by Form Type

Form	Has Keyword	All Filings	Percent
10-K	1,785	5,791	31%
20-F	286	729	39%
40-F	91	124	73%
Total	2,162	6,644	33%

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. For each form type, the table indicates how many contain any of the climate-related keywords, which include "climate change," "climate risk," and "global warming."

Figure 1. Filings with Climate-related Keywords by Form Type

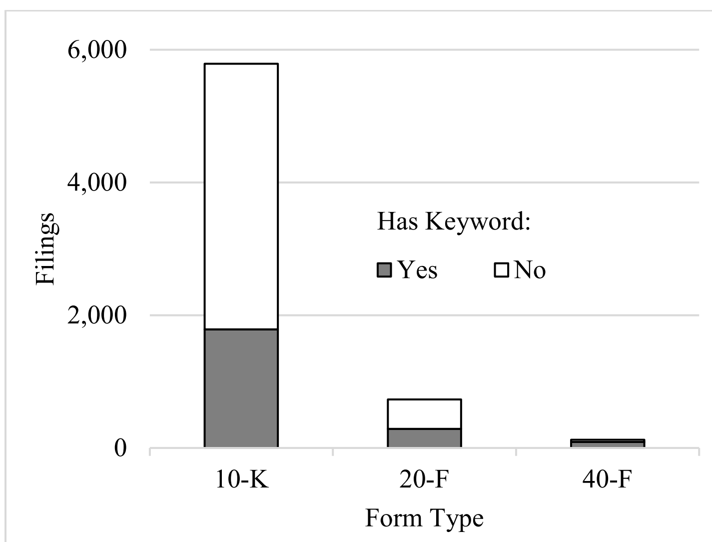


Table 2. Filings with Climate-related Keywords by Accelerated Filer Status

Filer Status	Has Keyword	All Filings	Percent
LAF	1,117	2,280	49%
AF	371	1,290	29%
NAF	465	2,754	17%
Other	209	320	65%
Total	2,162	6,644	33%

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. Filer status consists of large accelerated filers (LAF), accelerated filers (AF), and non-accelerated filers (NAF). For each filer status, the table indicates how many contain any of the climate-related keywords, which include "climate change," "climate risk," and "global warming."

Figure 2. Filings with Climate-related Keywords by Accelerated Filer Status

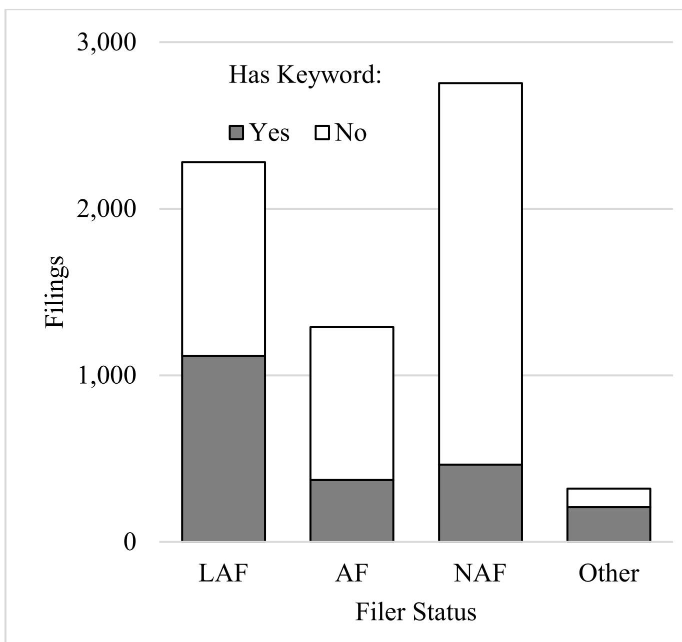
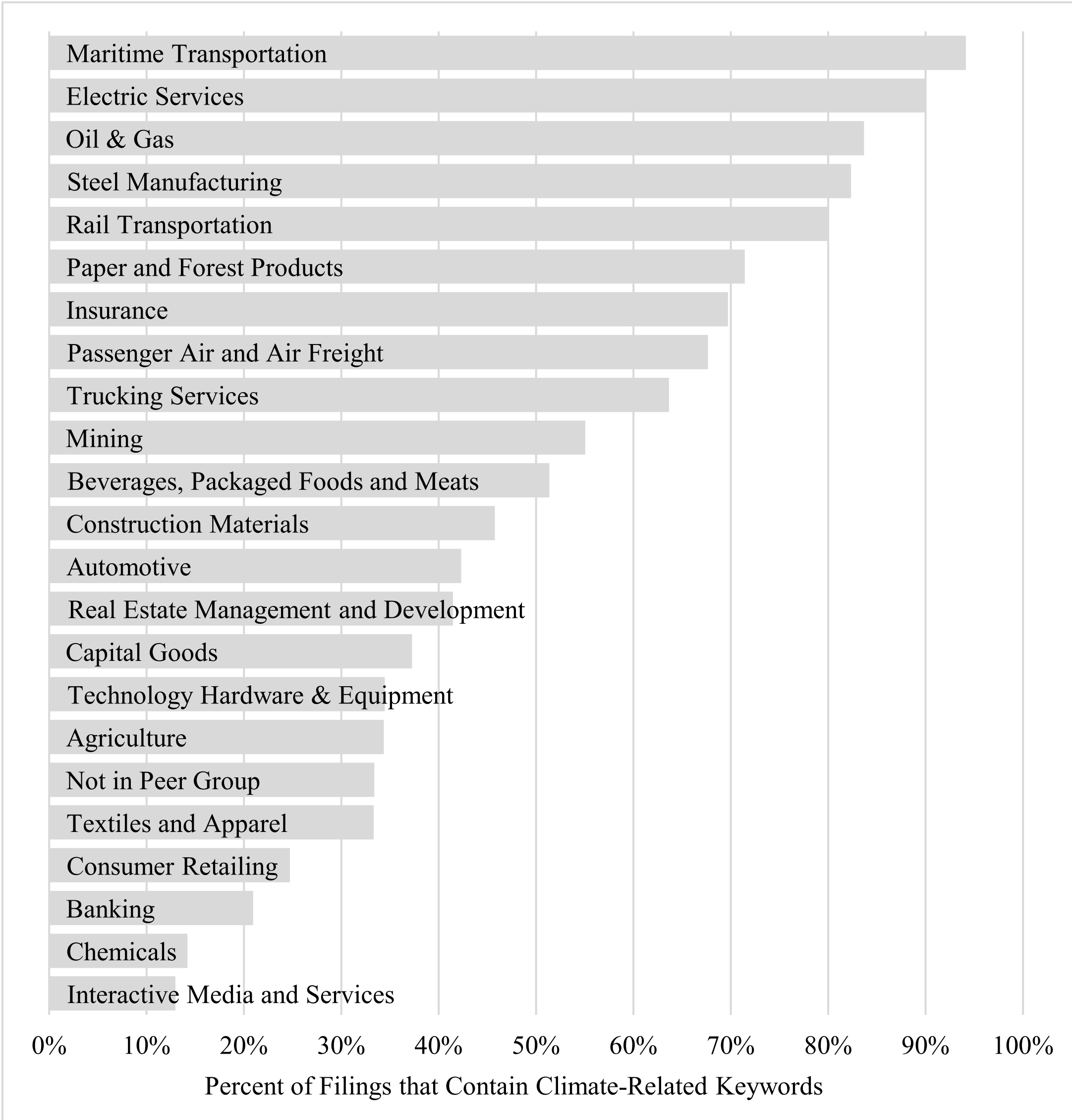


Table 3. Filings with Climate-related Keywords by Industry

Industry	Has Keyword	All Filings	Percent
Maritime Transportation	64	68	94%
Electric Services	154	171	90%
Oil and Gas	169	202	84%
Steel Manufacturing	14	17	82%
Rail Transportation	8	10	80%
Paper and Forest Products	20	28	71%
Insurance	46	66	70%
Passenger Air and Air Freight	23	34	68%
Trucking Services	14	22	64%
Mining	109	198	55%
Beverages, Packaged Foods and Meats	56	109	51%
Construction Materials	54	118	46%
Automotive	11	26	42%
Real Estate Management and Development	274	661	41%
Capital Goods	41	110	37%
Technology Hardware & Equipment	61	177	34%
Agriculture	11	32	34%
Textiles and Apparel	12	36	33%
Not in Peer Group	478	1,431	33%
Consumer Retailing	138	558	25%
Banking	158	754	21%
Chemicals	131	922	14%
Interactive Media and Services	116	894	13%
Total	2,162	6,644	33%

This table presents the analysis of annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. For each industry, the table indicates how many contain any of the climate-related keywords, which include “climate change,” “climate risk,” and “global warming.”

Figure 3. Filings with Climate-related Keywords by Industry

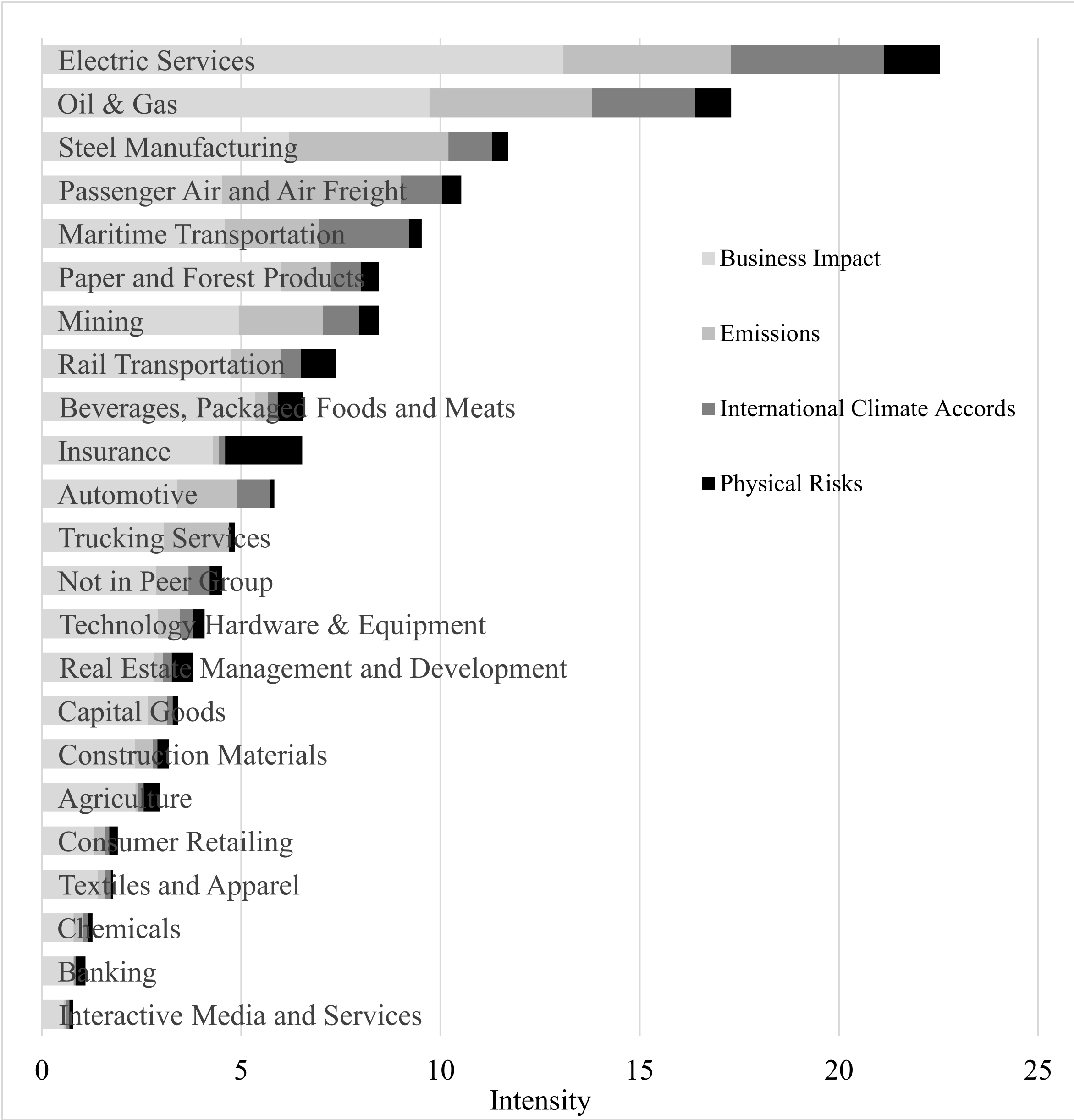


Using the same sample of annual reports, additional analysis was conducted by Commission's staff using natural language processing (NLP), which can provide insight on the semantic meaning of individual sentences within registrants' climate-related disclosures and classify them into topics (i.e. clusters).[755] The NLP analysis suggests that climate-related disclosures can be broadly organized into four topics: business impact, emissions, international climate accords, and physical risks. The analysis finds significant heterogeneity, both within the quantity and content, of climate-related disclosures across industries, as shown in Figures 4 and 5. Figure 4 presents the intensity of disclosure for domestic filings. The intensity refers to sentences per firm, which is calculated by taking the aggregate number of sentences in an industry and dividing it by the total number of firms within the industry (including those that do not discuss climate change at all). Thus, the intensity represents a more comparable estimate across industries.

Figure 4 shows that firms in the following industries have the most ample climate-related discussion, on average: electric services, oil and gas, steel manufacturing, passenger air and air freight, and maritime transportation. The majority of the discussion is on business impact, followed by emissions, international climate accords, and physical risks. Figure 5 presents the corresponding information for foreign filings (Forms 40-F and 20-F). Overall, the analysis indicates that the majority of the disclosure is focused on transition risks, with comparatively fewer mentions of physical risk.

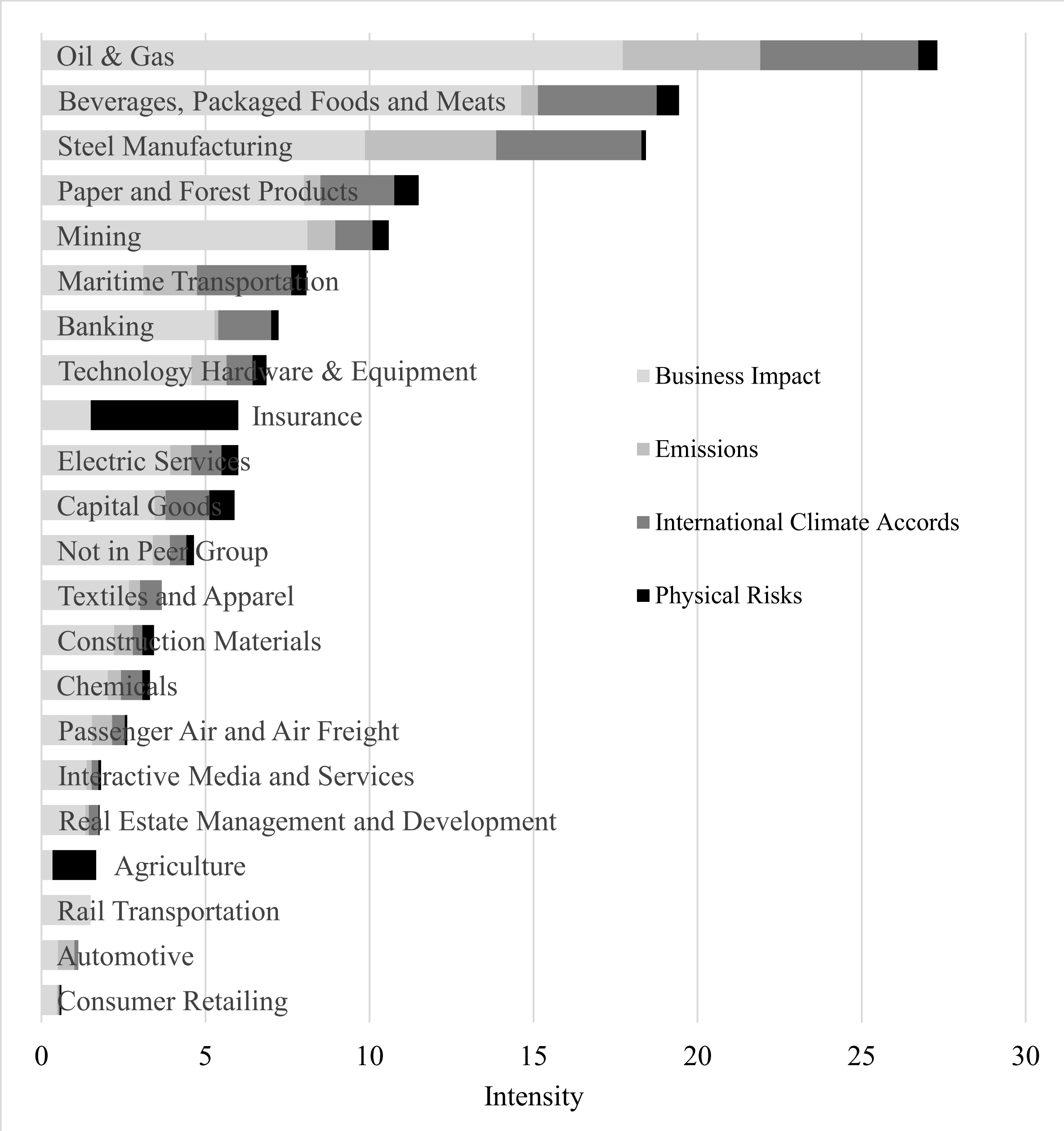
[755] The specific NLP method used in this analysis is word embedding, which utilizes Google's publicly available, pre-trained word vectors that are then applied to the text of climate-related disclosures within regulatory filings. While this NLP analysis can be used to identify the general topic and the extent of disclosures, it is limited in its ability to discern the quality or decision-usefulness of disclosures from investors' perspective.

Figure 4. Clustered Intensity by Industry for Forms 10-K



This figure presents the analysis of Form 10-K annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. Natural language processing (NLP) is used to analyze sentences contained within the annual filings and classify them into four broad topics (i.e. clusters): business impact, emissions, international climate accords, and physical risks. Intensity refers to sentences per firm, which is calculated by taking the aggregate number of sentences in an industry and dividing it by the total number of firms within the industry

Figure 5. Clustered Intensity by Industry for Foreign Filings (Forms 40-F and 20-F)



This figure presents the analysis of Forms 40-F and 20-F annual filings submitted to the Commission between June 27, 2019, and Dec. 31, 2020. Natural language processing (NLP) is used to analyze sentences contained within the annual filings and classify them into four broad topics (i.e. clusters): business impact, emissions, international climate accords, and physical risks. Intensity refers to sentences per firm, which is calculated by taking the aggregate number of sentences in an industry and dividing it by the total number of firms within the industry.

The staff's findings are consistent with academic studies that have looked at the extent of climate-related disclosures by SEC registrants. Bolstad et al. (2020) systematically reviewed

Form 10-K filings from Russell 3000 firms over the last 12 years and found that the majority of climate-related disclosure is focused on transition risks as opposed to physical risks.[756] They further report that while 35% of Russell 3000 firms provided climate-related information in 2009, this figure grew to 60% in 2020,[757] representing a significant increase. They also found that the extent of disclosure for a given report has increased. In 2009, firms mentioned climate risks 8.4 times on average in their Form 10-K. This figure grew to 19.1 times in 2020.

b. Additional Trends in Climate-Related Disclosures

While Commission staff reviewed certain firms' sustainability reports for climate-related disclosures, they did not conduct a systematic review of a large, representative sample of sustainability reports. However, as discussed below, a number of industry and advocacy groups have examined the scope of voluntary ESG reporting, including climate-related disclosures and their findings could be relevant to an assessment of the proposed rules' impact.

The U.S. Chamber of Commerce's Center for Capital Markets Competitiveness (CCMC), in collaboration with several other organizations, conducted a survey ("CCMC Survey") on a sample of U.S. public companies – 436 companies across 17 industries that range from small to large in terms of market capitalization.[758] According to the survey, over half of the companies (52%) are currently publishing a corporate social responsibility (CSR), sustainability, ESG or similar report whose content commonly includes information regarding climate-related risks.

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[756] *See* P. Bolstad, S. Frank, E. Gesick, and D. Victor, Flying Blind: What Do Investors Really Know About Climate Change Risks in the U.S. Equity and Municipal Debt Markets, *Hutchins Center Working Paper* 67 (2020).

[757] *Id.* The methodology uses a series of keywords to determine whether a company provides climate-related disclosures. Some keywords may occur in non-climate contexts, with the authors noting that the statistics are biased.

[758] *See* Climate Change & ESG Reporting from the Public Company Perspective (2021), *available at* https://www.centerforcapitalmarkets.com/wp-content/uploads/2021/08/CCMC_ESG_Report_v4.pdf.

The most frequently discussed topics there are energy (74%), emissions (70%), environmental policy (69%), water (59%), climate mitigation strategy (57%), and supplier environmental policies (35%). Among the registrants that report climate-related information to the public, the majority disclose such information via external reports or company websites rather than regulatory filings. Similar to the Commission staff review, the CCMC Survey finds that about a third (34%) of the respondents disclose climate change, greenhouse gas emissions, or energy sourcing in their SEC filings information on risks. Among these firms, 82% disclose such information in Risk Factors, 26% in the MD&A, 19% in the Description of Business, and 4% in Legal Proceedings.

The Governance & Accountability Institute[759] ("G&A") analyzed sustainability reports by the companies belonging to the Russell 1000 Index and found that in 2020, 70% published sustainability reports – up from 65% in 2019 and 60% in 2018.[760]

Other sources confirm that, at least within samples of larger firms, a sizeable portion already measure and disclose their emissions, though not necessarily through their regulatory filings. The CDP[761] reports that out of the 524 U.S. companies in their Climate High Impact

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759 Governance & Accountability Institute Inc. ("G&A, Inc.") is a consulting and research organization providing services to publicly traded and privately owned companies to help enhance their public environmental, social and governance (ESG) and sustainability profiles.

760 *See* G & A Inc., Sustainability Reporting in Focus (2021), *available at* https://www.ga-institute.com/research/ga-research-collection/sustainability-reporting-trends/2021-sustainability-reporting-in-focus.html.

761 CDP operates a global disclosure system that enables companies, cities, states and regions to measure and manage their environmental risks, opportunities and impacts. Despite not being a framework like GRI, SASB and TCFD, CDP's questionnaires gather both qualitative and quantitative information from across governance, strategy, risk, impact and performance. To aid comparability and ensure comprehensiveness, CDP includes

Sample,[762] 402 disclosed through the CDP system in 2021, up from 379 in 2020, and 364 in 2019. Out of the sample of reviewed companies, 22.1% (89 out of 402 companies) reported Scope 3 emissions in 2021. This reflects an increase from the previous two years, during which 18% (67 out of 379 companies) reported such information in 2020, and 17% (62 out of 364 companies) in 2019.[763] One commenter stated that there is significant variation in disclosure rates of GHG emissions across various industries.[764] The commenter, using a sample of the 1,100 U.S. companies included within the Sustainalytics dataset, reports that the disclosure rate of material Scopes 1, 2, and 3 emissions is 59.5%.[765] Furthermore, the International Platform on Sustainable Finance found that among the U.S. listed firms present in the Refinitiv dataset, 10.8% disclosed Scope 1 emissions in 2019, representing 55.4% of U.S. market capitalization.[766] To the extent that registrants' current climate-related disclosures overlap with the proposed rules, registrants may face lower incremental compliance costs, as discussed in further detail below.[767]

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sector-specific questions and data points. In 2018, CDP aligned its climate change questionnaire with the TCFD.

762 The CDP Climate High Impact sample identifies companies deemed high impact based on two main considerations – market cap and GHG emissions.

763 *See* Letter from CDP North America (Dec. 13, 2021).

764 *See* Letter from Aron Szapiro, Head of Policy Research, Morningstar (June 9, 2021).

765 *Id.* The comment letter does not disaggregate the disclosure rate across the different scopes of emissions.

766 *See* State and Trends of ESG Disclosure Policy Measures Across IPSF Jurisdictions, Brazil, and the US, International Platform on Sustainable Finance (2021) (The disclosure rates are calculated using data from Refinitiv), *available at* https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/211104-ipsf-esg-disclosure-report_en.pdf.

767 *See* Section IV.C.2.3.

c. Use of Third-Party Frameworks

Some companies follow existing third-party reporting frameworks when developing climate-related disclosures for SEC filings or to be included in CSR, sustainability, ESG, or similar reports. For instance, the CCMC Survey finds that 59% of respondents follow one or more such frameworks. Among these respondents, 44% use the SASB,[768] 31% use the GRI,[769] 29% use the TCFD,[770] and 24% use the CDP.[771] Similar statistics on the usage of different reporting frameworks are also provided by other studies. The G&A report[772] finds that 53% of the Russel 1000 reporters either mention or align with SASB,[773] 52% utilized GRI reporting

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768 The SASB standards are designed for communication by companies to investors about how sustainability issues impact long-term enterprise value. SASB standards guide the disclosure of financially material sustainability information by companies to their investors. SASB standards, which are available for 77 industries, identify the subset of ESG issues most relevant to financial performance in each industry. The SASB standards can be both complementary with the core elements of the TCFD recommendations, as well as used by organizations to operationalize them. *See* https://www.sasb.org/about/sasb-and-other-esg-frameworks/

769 The GRI standards outline both how and what to report regarding the material economic, social and environmental impacts of an organization on sustainable development. For 33 potentially material sustainability topics, the GRI standards contain disclosure requirements. Three series of GRI standards support the reporting process: the GRI Topic Standards, each dedicated to a particular topic and listing disclosures relevant to that topic; the GRI Sector Standards, which are applicable to specific sectors; and the GRI Universal Standards, which apply to all organizations. The GRI Standards can be used in sustainability reports, as well as in annual or integrated reports that are oriented at a broad range of stakeholders. *See* https://www.globalreporting.org/standards/

770 The TCFD recommended disclosures cover four core elements: Governance, Strategy, Risk Management and Metrics and Targets. Each element has two or three specific disclosures (as shown in Table 4) to be made in the organization's mainstream report (i.e. annual financial filings). These are meant to generate comparable, consistent and reliable information on climate-related risks. The TCFD provides both general, and in some cases, sector-specific guidance for each disclosure, while simultaneously framing the context for disclosure, and offering suggestions on what and how to disclose in the mainstream report. *See* https://www.fsb-tcfd.org/recommendations/

771 *See supra* note 761.

772 *See* supra note 760.

773 Of the Russell 1000 reporting companies, 39% indicate that they are in alignment with SASB standards, while the other 14% simply mention the standards.

standards,[774] 30% either mention or align with TCFD recommendations,[775] and 40% responded to the CDP Climate Change questionnaire. The law firm White & Case also conducted an in-depth review of website sustainability disclosures by 80 small- and mid-cap firms across five different industries and found comparable numbers.[776]

While these various frameworks are distinct, they overlap in their alignment with the TCFD. In particular, the CDP questionnaire fully incorporates the TCFD framework and thus exhibits full alignment.[777] The Corporate Reporting Dialogue[778] also provides a detailed assessment of the various frameworks' degrees of alignment with each TCFD disclosure item, ranging from maximum to minimum alignment as follows: Full, Reasonable, Moderate, Very Limited, and None. They report that the GRI exhibits "Reasonable" alignment, while the SASB

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774 Of those reporters utilizing the GRI standards, G&A finds that a small portion (5%) utilizes the "Comprehensive" level of reporting, the majority (64%) chose to report in accordance with the "Core" option, while the remaining portion (31%) utilizes "GRI-Referenced" reports, which are not fully in accordance with the GRI standards. GRI-Referenced reports contain the GRI Content Index and reference certain disclosures.

775 Of the Russell 1000 reporting companies, 17% indicate that they are in alignment with the TCFD recommendations, while the other 13% simply mention the recommendations.

776 *See* White & Case and the Society for Corporate Governance: A Survey and In-Depth Review of Sustainability Disclosures by Small- and Mid-Cap Companies, *available at* https://www.whitecase.com/publications/article/survey-and-depth-review-sustainability-disclosures-small-and-mid-cap-companies (Among the firms reviewed, 41 firms (51%) provided some form of voluntary sustainability disclosure on their websites. Further, only nine of those 41 firms indicated the reporting standards with which they aligned their reporting, with the majority of the nine companies not following any one set of standards completely. Additionally, six firms followed the GRI, while three firms stated that they follow both the TCFD and SASB).

777 *See* How CDP is Aligned to the TCFD (2018), *available at* https://www.cdp.net/en/guidance/how-cdp-is-aligned-to-the-tcfd.

778 The Corporate Reporting Dialogue is a platform, convened by the Value Reporting Foundation, to promote greater coherence, consistency and comparability between corporate reporting frameworks, standards and related requirement. *See Driving Alignment in Climate-related Reporting, Corporate Reporting Dialogue* (2019), *available at* https://www.integratedreporting.org/wp-content/uploads/2019/09/CRD_BAP_Report_2019.pdf.

generally exhibits "Moderate" or "Reasonable" alignment with the majority of the TCFD disclosure items. Thus, companies that report following the CDP, SASB, or GRI frameworks are, to varying degrees, already producing disclosures that are in line with parts of the TCFD. However, because each framework takes different approaches (e.g. intended audience, reporting channel) and because certain differences exist in the scope and definitions of certain elements, investors may find it difficult to compare disclosures under each framework. Table 4 reports the rate of disclosure for each TCFD disclosure element for a sample of 659 U.S. companies in 2020/21.

Table 4. Disclosure Rate of TCFD Elements among U.S. Firms[779]

TCFD Disclosure Element			Rate of Disclosure
Governance	a)	Describe the board's oversight of climate-related risks and opportunities	17%
	b)	Describe management's role in assessing and managing climate-related risks and opportunities.	10%
Strategy	a)	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	45%
	b)	Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	34%
	c)	Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	5%
Risk Management	a)	Describe the organization's processes for identifying and assessing climate-related risks.	15%

779 *See* Moody's Analytics, TCFD-Aligned Reporting by Major U.S. and European Corporations, (2022), *available at* https://www.moodysanalytics.com/articles/pa/2022/tcfd_aligned_reporting_by_major_us_and_european_corporations. To arrive at these statistics, Moody's conducted an artificial intelligence (AI) based review of all public filings, including financial filings, annual reports, integrated reports, sustainability reports, and other publicly available reports that were associated with companies' annual reporting on sustainability. Non-public disclosures, such as CDP reports, were not included in the analysis.

	b) Describe the organization's processes for managing climate-related risks.	17%
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	16%
Metrics and Targets	a) Describe the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	21%
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	19%
	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	25%

d. Climate-Related Targets, Goals, and Transition Plan Disclosures

Carbon reduction targets or goals have become an increasing focus for both companies and countries.[780] For example, 191 countries, including the United States and European Union, have signed the Paris Climate Agreement. The agreement aims to strengthen the global response to the threat of climate change by keeping a rise in global temperatures to well below 2º Celsius above pre-industrial levels this century, as well as pursue efforts to limit the temperature increase even further to 1.5º degrees Celsius.[781] As of 2020, according to one source, about two-thirds of S&P 500 companies have established a target for carbon emissions – a number that has nearly doubled over the past decade.[782] Approximately one-fifth of these companies have science-based

[780] *See* Commitments to Net Zero Double in Less Than a Year, United Nations Climate Change (Sept. 21, 2020), *available at* https://unfccc.int/news/commitments-to-net-zero-double-in-less-than-a-year.

[781] *See* Section I.

[782] *See, e.g.*, J. Eaglesham, Climate Promises by Businesses Face New Scrutiny, *The Wall Street Journal* (2021), *available at* www.wsj.com/articles/climate-promises-by-businesses-face-new-scrutiny-11636104600.

targets in-line with a 1.5 degree Celsius limit on global warming.[783] In addition, a growing number of companies or organizations have signed on to the Climate Pledge, which indicates a commitment to achieve net-zero emissions by 2040.[784] The trend in companies disclosing other climate-related targets (e.g. water usage) has also been increasing over time.[785]

Despite the increasing prevalence in stated targets and goals, monitoring which firms are taking steps to implement them is difficult given the lack of required recurring standardized metrics for progress. Absent such a monitoring device, investors have insufficient information to gauge the credibility of the targets. Moreover, without knowing the specific strategy that registrants intend on adopting in pursuit of their targets, investors are unable to determine how the targets will impact the company's financial position (e.g., a company that plans to only purchase offsets may face different risks and costs over time than a company that invests in renewable energy or carbon capture technology).[786]

Consistent with this need for an oversight or monitoring mechanism, research suggests that the prevalence of "green bonds" and positive cumulative abnormal stock returns surrounding

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[783] *See* memorandum, dated Nov. 30, 2021, concerning staff meeting with representatives of Persefoni. This statistic is compiled by Persefoni using information from the Science Based Targets Initiative. This and the other staff memoranda referenced below are available at https://www.sec.gov/comments/s7-10-22/s71022.htm.

[784] As of Jan. 25, 2022, The Climate Pledge has acquired 217 signatories. *See* The Climate Pledge, *available at* https://www.theclimatepledge.com/us/en/Signatories.

[785] For example, the percentage of both global and U.S. companies with water reduction targets grew by 4% in 2019 on a year-over-year basis. This represented 28% of major global companies (i.e. those listed on the S&P Global 1200 index) and 27% of major (i.e. those listed in the S&P 500 index)) U.S. companies publicly disclosing these targets. *See* State of Green Business 2021, *available at* https://www.spglobal.com/marketintelligence/en/news-insights/research/state-of-green-business-2021.

[786] *See* S. Lu, *The Green Bonding Hypothesis: How do Green Bonds Enhance the Credibility of Environmental Commitments?* (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3898909.

their announcements may arise, at least in part, because they help signal credible value-enhancing targets in the absence of mandatory standardized public disclosures.[787] These findings suggest a demand for such an oversight or monitoring mechanism for targets and goals among investors that would facilitate their understanding of registrants' stated climate-related targets and progress and the impact on the registrant's business.

e. Third-Party Assurance of Climate-Related Disclosures

Among the companies that provide climate-related disclosures, a considerable portion include some form of third-party assurance for these disclosures. The G&A study[788] finds that 35% of Russell 1000 index firms, which are virtually all large accelerated filers, obtained third-party assurance for their sustainability reports in 2020, up from 24% in the year prior. The rate of assurance is concentrated among the larger half of the sample firms (i.e., the S&P 500 firms). Among the firms that obtained assurance, however, only 3% obtained assurance for the entire report. The remaining firms were evenly split between obtaining assurance on specified sections only and GHG emissions only. Regarding the level of assurance, the overwhelming majority (90%) obtained limited assurance while only 7% obtained reasonable assurance. Regarding service providers, 14% of firms received assurance from an accounting firm, 31% from small consultancy/boutique firms, and 55% from engineering firms. Because these statistics are limited

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787 *See* C. Flammer, Corporate Green Bonds, *Journal of Financial Economics*, 499-516 (2021). (Green bonds may only be a partial solution to achieving credible targets given that they have implications beyond commitment.)

788 *See supra* note 760.

to Russell 1000 firms, corresponding figures for the full sample of U.S. registrants may be lower to the extent that the practice of obtaining third-party assurance is concentrated in large firms.[789]

B. Broad Economic Considerations

1. Investors' Demand for Climate Information

Investors have expressed a need for information on climate-related risks as they relate to companies' operations and financial condition. [790] The results of multiple recent surveys indicate that climate risks are among the most important priorities for a broad set of large asset

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789 Other studies also report evidence of third-party assurance among smaller samples of companies analyzed. For example, according to a recent study by the International Federation of Accountants, in 2019, 99 out of the 100 largest U.S. firms by market capitalization provided some form of sustainability disclosure, which may contain climate-related information among other sustainability-related topics. Seventy of those firms obtained some level of third-party assurance, with the vast majority being "limited assurance" according to the study. Of the 70 firms that obtained assurance, the study reports that 54 obtained "limited assurance," eight obtained "reasonable assurance," five obtained "moderate assurance," and three did not disclose any assurance. Of the 81 unique assurance reports examined in the study, nine were found to be issued by an auditing firm, while 72 were issued by another service provider. *See* International Federation of Accountants ("IFAC"), The State of Play in Sustainability Assurance (2021), *available at* https://www.ifac.org/knowledge-gateway/contributing-global-economy/publications/state-play-sustainability-assurance. Among the sample of 436 companies included in the CCMC Survey, 28% disclosed that they engaged a third party to provide some form of assurance regarding their climate-related disclosure (the frequency of these disclosures was 52% among the 436 companies in the sample). *See supra* note 758.

790 *See* 2021 Global Investor Statement to Governments on the Climate Crisis (2021) (this statement has been signed by 733 investors collectively managing over US$52 trillion in assets), *available at* https://theinvestoragenda.org/wp-content/uploads/2021/09/2021-Global-Investor-Statement-to-Governments-on-the-Climate-Crisis.pdf; *See also* Alexander Karsner, *Testimony Before the House Financial Services Subcommittee on National Security*, INTERNATIONAL DEVELOPMENT AND MONETARY POLICY (Sept. 11, 2019), *available at* https://financialservices.house.gov/uploadedfiles/hhrg-116-ba10-wstate-karsnera-20190911.pdf. A recent report examined how climate change could affect 22 different sectors of the U.S. economy and found that if global temperatures rose 2.8 °C from pre-industrial levels by 2100, climate change could cost $396 billion each year. If temperatures increased by 4.5˚ °C, the yearly costs would reach $520 billion. *See* Jeremy Martinich and Allison Crimmins, *Climate Damages and Adaptation Potential Across Diverse Sectors of the United States*, NATURE CLIMATE CHANGE 9, 397–404 (2019); *available at* https://www.nature.com/articles/s41558-019-0444-6. Similarly, the Swiss Re Institute estimated how global warming could affect 48 countries – representing 90% of the world economy – and found that the decrease in GDP in North America could range from – 3.1% if Paris Agreement targets are met (a well-below 2°C increase), to – 9.5% if no mitigating actions are taken (3.2°C increase); *See* The Economics of Climate Change: No Action Not an Option, *available at* https://www.swissre.com/dam/jcr:e73ee7c3-7f83-4c17-a2b8-8ef23a8d3312/swiss-re-institute-expertise-publication-economics-of-climate-change.pdf.

managers.[791] PWC reported in their Annual Global CEO Survey that in 2016, only 39% of asset and wealth management CEOs reported that they were concerned about the threats posed by physical risks brought about climate change, whereas this figure increased to 70% in 2021.[792]

Investors' demand for climate-related information may also be related to the transition risks that companies face (e.g. changes in future regulation, shifts in investor, consumer, counterparty preferences or other market conditions, and other technological challenges or innovations). For example, the United States' commitment to the Paris Agreement may have contributed to investors' demand for information on registrants' emissions and exposure to potential transition risk, as well as whether they have in place emissions targets with credible pathways of achievement.[793] The 2021 Institutional Investors Survey solicited the views of 42 global institutional investors managing over $29 trillion in assets (more than a quarter of global assets under management (AUM)) and found that climate risk remains the number one investor engagement priority. A significant majority (85%) of surveyed investors cite climate risk as the leading issue driving their engagements with companies. These institutional investors also

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791 *See, e.g.*, Emirhan Ilhan, Climate Risk Disclosure and Institutional Investors, *Swiss Fin. Inst. Research Paper Series* (Working Paper No. 19-66), (last revised Jan. 7, 2020), *available at* https://ssrn.com/abstract=3437178 (noting that a survey of 439 large institutional investors shows that 79% of respondents believe that climate risk reporting is as important as traditional financial reporting, and almost one-third consider it to be more important); *See also* Macquaire Asset Management 2021 ESG Survey Report (2021), *available at* https://www.mirafunds.com/assets/mira/our-approach/sustainability/mam-esg-survey/mam-2021-esg-survey-report.pdf (noting that in a survey of 180 global institutional real assets investors, including asset managers, banks, consultants and investment advisors, foundations and endowments, insurance companies, and pension funds, who combined represent more than $21 trillion of assets under management, more than half of responding investors selected climate change as their primary ESG concern).

792 *See* PWC, *The Economic Realities of ESG* (Oct. 28, 2021), *available at* https://www.pwc.com/gx/en/services/audit-assurance/corporate-reporting/esg-investor-survey.html.

793 *See* Section IV.A.5.d.

indicated that they consider climate risk to be material to their investment portfolios and are demanding robust and quantifiable disclosure around its impacts and the plan to transition to net zero.[794]

State Street Global Advisors (SSGA) and Blackrock, two of the world's largest investment managers, recently announced the focus areas for their asset stewardship program for 2022, with climate change at the top of their priority list. One of the key expectations set by SSGA this year is a requirement for companies to provide disclosures aligned with TCFD recommendations, including reporting on board oversight on climate-related risks and opportunities, Scope 1 and 2 GHG emissions, and targets for emissions reduction.[795] Similarly, Blackrock expects to continue encouraging companies to demonstrate that their plans are resilient under likely decarbonization pathways, and to ask that companies disclose a net zero-aligned business plan that is consistent with their business model to demonstrate how their targets are consistent with the long-term economic interests of their shareholders.[796]

Investors, including large institutional investors, have also formed initiatives aimed in part at improving corporate disclosures on climate-related risks. These initiatives include the

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794 *See* Morrow and Sodali, Institutional Investor Survey (2021), *available at* https://higherlogicdownload.s3.amazonaws.com/GOVERNANCEPROFESSIONALS/a8892c7c-6297-4149-b9fc-378577d0b150/UploadedImages/Institutional_Investor_Survey_2021.pdf.

795 *See* https://www.esgtoday.com/state-street-to-require-companies-to-provide-tcfd-aligned-climate-disclosures/

796 *See* BlackRock Investment Stewardship (BIS), *Policies Updated Summary* (2022), https://www.blackrock.com/corporate/literature/fact-sheet/blk-responsible-investment-engprinciples-global-summary.pdf

Climate Disclosure Project, Climate Action 100+,[797] the Global Investor Coalition on Climate Change ("GIC"),[798] the Institutional Investors Group on Climate Change ("IIGCC"),[799] and the Transition Pathway Initiative ("TPI"),[800] with many of these groups seeing increasing membership in recent years.[801] In addition to stated demand, revealed preferences from investment decisions and asset price responses to ESG-related news and climate change risk suggest substantive demand for information on climate-related risks.[802] Investors have also demonstrated their interest in climate-related issues through an increase in climate-related

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797 Climate Action 100+ is composed of 615 global investors across 33 markets with more than US$60 trillion in AUM. *See* Climate Action 100+, *available at* https://www.climateaction100.org/about/.

798 As of Apr. 2018, GIC was signed by 409 investors representing more than U.S. $24 trillion in AUM, *available at* https://climateinitiativesplatform.org/index.php/Global_Investor_Coalition_on_Climate_Change_(GIC).

799 IIGCC has more than 330 members, mainly pension funds and asset managers, across 22 countries, with over $33 trillion in AUM. *See* The Institutional Investors Group on Climate Change, *available at* https://www.iigcc.org/.

800 The TPI is supported globally by 108 investors with more than $29 trillion combined AUM. *See* Transition Pathway Initiative, *available at* https://www.transitionpathwayinitiative.org/.

801 For example, Climate Action 100+ launched in 2017 with 225 investors with more than USD $26.3 trillion AUM to engage with 100+ of the world's highest emitting companies to reduce material climate risks. In 2021, Climate Action 100+ has grown to 615 investors, $60 trillion in assets, engaging with 167 companies that represent 80%+ of global industrial emissions.

802 *See* P. Krüger, *Corporate Goodness and Shareholder Wealth*, 115(2) JOURNAL OF FINANCIAL ECONOMICS 304-329 (2015); G. Capelle-Blancard, A. Petit, *Every Little Helps? ESG News and Stock Market Reaction*, JOURNAL OF BUSINESS ETHICS 157, 543–565 (2019); and G. Serafeim and A. Yoon, *Which Corporate ESG News Does the Market React To?* (Forthcoming) FINANCIAL ANALYSTS JOURNAL (2021) (for evidence of stock market responses to ESG news). *See also* A. Bernstein, M. Gustafson, and R. Lewis, *Disaster on the Horizon: The Price Effect of Sea Level Rise*, 134.2 JOURNAL OF FINANCIAL *Economics* 253-300 (2019), A. Bernstein, S. Billings, M Gustafson, and R. Lewis, *Partisan Residential Sorting on Climate Change Risk* (Forthcoming), JOURNAL OF FINANCIAL ECONOMICS (2021); M. Baldauf,L. Garlappi, and C.Yannelis, *Does Climate Change Affect Real Estate Prices? Only If You Believe In It*, 33 (3) REVIEW OF FINANCIAL STUDIES 1256-1295 (2020) (for evidence of responses of investor demand in equilibrium prices and investment choice (based on heterogeneous preferences and beliefs) in real estate markets).

shareholder proposals[803] and increased flows into mutual funds with environmental goals in their investment mandates.[804]

2. Impediments to voluntary climate-related disclosures

a. General impediments to voluntary climate-related disclosures

In practice, however, investors' demand for climate-related information is often met by inconsistent and incomplete disclosures due to the considerable variation in the coverage, specificity, location, and reliability of information related to climate risk. Multiple third-party reporting frameworks and data providers have emerged over the years; however, these resources lack mechanisms to ensure compliance and can contribute to reporting fragmentation.[805] Due to deficiencies in current climate-reporting practices, investor demand for comparable and reliable information does not appear to have been met.[806] As a result, investors may face difficulties

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[803] A recent 2021 proxy season review by the Harvard Law School found that shareholder climate-related proposals have increased for the second consecutive year. The authors also note that, in 2021, environmental proposals were withdrawn at a meaningfully higher rate relative to the prior year. This is an indication of stronger commitments from companies to take actions towards the specified environmental goals, or at the very least provide the related disclosures. Many companies may prefer engaging with a proponent rather than taking the proposal to a vote. *See* 2021 Proxy Season Review: Shareholder Proposals on Environmental Matters, *available at* https://corpgov.law.harvard.edu/2021/08/11/2021-proxy-season-review-shareholder-proposals-on-environmental-matters/.

[804] *See* S.M. Hartzmark and A.B. Sussman, *Do Investors Value Sustainability? A Natural Experiment Examining Ranking and Fund Flows*, 74 (6) THE JOURNAL OF FINANCE 2789-2837 (2019). Data from fund tracker Morningstar Inc. compiled by Goldman Sachs Group Inc. shows that, since the start of 2019, a net $473 billion has flowed into stock mutual and exchange-traded funds with environmental goals as part of their mandates, compared to a net $103 billion going into all other stock funds. *See* Scott Patterson and Amrith Ramkumar, *Green Finance Goes Mainstream, Lining Up Trillions Behind Global Energy Transition*, Wall Street Journal (May 22, 2021), *available at* https://www.wsj.com/articles/green-finance-goes-mainstream-lining-up-trillions-behind-global-energy-transition-11621656039?mod=article_inline.

[805] *See* Section IV.B.2.b.

[806] *See* IOSCO, *Report on Sustainability-Related Registrant Disclosures*(2021), *available at* https://www.iosco.org/library/pubdocs/pdf/IOSCOPD678.pdf.

locating and assessing climate-related information when making their investment or voting decisions.[807] Below we describe some key market failures with regard to disclosure, for example (1) disclosures are not costless; (2), there are agency problems;[808] (3) managers may inaccurately present information; and (4) investor responses may be unpredictable and non-unfirm.[809] In addition, there may be other problems, e.g. a lack of consistency, that may indicate Commission action.

(1) Disclosures are not costless

In practice, firms can still approach full disclosure voluntarily if there are costs to disclosure, as long as these costs are relatively low.[810] This is not the case, however, if individual firms' private benefits of disclosure are also small, yet those same disclosures provide positive informational externalities. For example, disclosures by one registrant may provide investors with useful information via inference with respect to peer firms. Consistent with this theory, research in the accounting literature has documented that earnings announcements by one firm can provide predictive signals about the earnings of other firms in the same industry.[811] In these

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807 *See* GAO, Climate-Related Risks (2018) *available at* https://www.gao.gov/assets/gao-18-188.pdf (reporting that "investors may find it difficult to navigate through the filings to identify, compare, and analyze the climate-related disclosures across filings").

808 Agency problems are those conflicts of interest between shareholders (i.e., the principals) and managers (i.e., the agents) of a firm.

809 *See* Beyer, Cohen, Lys, and Walther, *The Financial Reporting Environment: Review of The recent Literature,* J. ACCT. ECON. 296–343 (2010) for a more technical and detailed discussion of these and other additional assumptions.

810 *See* for example R.E. Verrecchia, *Discretionary Disclosure*, 5 JOURNAL OF ACCOUNTING AND ECONOMICS 365-380 (1983).

811 *See* Robert Freeman and Senyo Tse, *An Earnings Prediction Approach to Examining Intercompany Information Transfers*, 15(4) J. ACCT. ECON. 509-523 (1992).

cases, disclosures can benefit investors in the aggregate (though not necessarily investors of a specific firm) by allowing them to make comparisons across firms, which can aid in their capital allocation decisions.

This illustrates how, theoretically, in the absence of mandated disclosure requirements, registrants fully internalize the costs of disclosure but not the benefits, which may lead them to rationally under-disclose relative to what is optimal from the investors' perspective.[812] As a result, a tension can exist between investors (in the aggregate) and managers, where investors prefer more disclosure and managers prefer less. In such instances, there may be scope for regulation to substantially increase information provision since absent regulation, investors are not able to fully ascertain the risks and opportunities that firms face.

(2) Agency problems

In order for voluntary disclosure to result in the complete revelation of all relevant private information, there would need to be no agency problems (*i.e.,* no conflicts of interest between managers and shareholders) such that managers' sole objective with respect to such disclosures would be to maximize shareholder information and, ultimately, shareholder value. However, if managers have other objectives and incentives for making voluntary disclosures (i.e., there exist agency problems), then the voluntary disclosures may not result in the same complete information.[813] Moreover, when agency problems exist, investors can no longer be sure if the absence of disclosure under a voluntary regime reflects good or bad news for the firm, given that

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[812] It is worth noting that in some cases, undertaking costly signals can allow agents to credibly signal their type to investors. In these cases, costly disclosures can lead to a separating equilibrium where it may otherwise not exist. *See* D. Kreps and J. Sobel, 2(1) *Signaling*, HANDBOOK OF GAME THEORY WITH ECONOMIC APPLICATIONS, 849-867 (1994); J. Riley, *Silver Signals: Twenty-Five Years of Screening and Signaling*, 39(1) JOURNAL OF ECONOMIC LITERATURE 432-478, (2001).

[813] *See* E. Einhorn. *Voluntary Disclosure Under Uncertainty About the Reporting Objective*, 43 JOURNAL OF ACCOUNTING AND ECONOMICS 245-274(2007).

some managers may have self-serving incentives. For example, managers may have career concerns which could incentivize them to withhold disclosing information they expect to be favorably received until it is useful to balance out bad news. In contrast, when the disclosure requirements are mandatory, the relevant, complete information should be disclosed regardless of managers' objectives or incentives, and investors would accordingly have more confidence in the completeness of the resulting disclosures. For these reasons, the benefits of a mandatory reporting regime may be more pronounced in settings in which disclosure-related conflicts of interests exist between managers and shareholders.

(3) Misrepresentation by managers

If investors are unable to verify that managerial disclosures are complete and truthful (e.g., if investors have difficulty in determining the extent of managers' selective disclosure of metrics or methods of computation, exaggeration, obfuscation, outright misreporting, etc.), then voluntary disclosures may not be fully revealing. For example, managers may be able to engage in misleading reporting (i.e., they can apply a favorable bias to their disclosures), but they incur a cost that increases with the magnitude of the misreporting.[814] Under these circumstances, theoretical research suggests that, in equilibrium, they may not accurately report their private information. This is because investors would not be able to distinguish truthful disclosures from those that are misleading (i.e., favorably biased). In this setting, all managers would then have an

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[814] *See* E. Einhorn, and A. Ziv, *Biased Voluntary Disclosure*, REVIEW OF ACCOUNTING STUDIES 420-442 (2012) (Biases in reporting can be any number of costs in these models. These include not only inefficient actual investments associated with the cost of distorted reporting, but also the risk of litigation, reputation erosion, and/or future flexibility in reporting.).

incentive to misreport by providing disclosures with a favorable bias, the extent of which depends on the cost of misreporting. Furthermore, because misreporting comes at a cost, this would violate the assumption of costless disclosure, which can exacerbate the issue of incomplete disclosures.[815]

If, on the other hand, misreporting has no costs for managers, then this results in what is referred to as a cheap talk equilibrium.[816] In this setting, any misalignment of incentives between managers and investors could again result in a situation in which not all relevant private information is fully revealed. While this could be driven by agency problems stemming from managerial self-interest, it also occurs when investors have heterogeneous preferences that cause differing incentives or if managers are concerned with strategic disclosures that may be viewed by not only investors, but also competitors, regulators, and customers.

In this case, a mandatory reporting regime would be beneficial to investors to the extent that voluntary disclosures are unverifiable and possibly misleading. These include situations where managers obfuscate certain information in their disclosures, convey information in a complex or difficult manner, or conceal the discretionary choices with respect to what was reported.

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[815] If misrepresentation becomes sufficiently costly, then there may be no managers who find it advantageous to misrepresent, despite any potential benefits. In this case, purposeful misrepresentation would not occur, thereby fulfilling one of the assumptions of the standard full revelation argument. Clear guidelines for disclosure and imposed costs upon the discovery of misrepresentation are important mechanisms for enforcing and promoting the transmission of information to investors.

[816] *See* V. Crawford, J. Sobel, *Strategic Information Transformation*, 50 ECONOMETRICA 1431-1451 (1982).

(4) Uncertain investor responses

Another condition necessary for voluntary reporting to be fully revealing is that managers must be certain of investor responses to disclosures. However, if investors have heterogeneous prior beliefs, such that managers cannot determine whether investors will consider a given disclosure good or bad news, then not all managers will choose to disclose, resulting in certain private information remaining undisclosed.[817] Similarly, if there are varying levels of sophistication among investors in their ability to understand disclosures, then again, some managers may be uncertain about how reports may be interpreted, leading them to abstain from some disclosures.[818] In this respect, mandatory disclosure is more likely to benefit investors in settings where the types of disclosures are complex or divisive, such that managers may not be certain how they will be perceived by investors with differing prior beliefs and/or sophistication.

b. Climate-specific factors that exacerbate impediments to voluntary disclosure

In the context of climate-related disclosure, these impediments may be made worse due to agency problems arising from the potentially long-term nature of certain climate-related risks and other issues related to the complexity and uncertainty of climate-related factors. We explore each of these impediments in further detail.

Impediments to climate-related disclosures may be exacerbated due to agency problems related to potential conflicts between short-term profitability and long-term climate risk horizons.

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[817] *See* J. Suijs, *Voluntary Disclosure Of Information When Firms Are Uncertain Of Investor Response*, 43 JOURNAL OF ACCOUNTING AND ECONOMICS 391-410 (2007).

[818] *See* R.A. Dye, *Investor Sophistication and Voluntary Disclosures*, 3 REVIEW OF ACCOUNTING STUDIES 261-287 (1998).

Physical and transition risks can materialize over time horizons ranging from the immediate future to several decades.[819] Likewise, shareholders may have interests in maximizing their investment returns over both the short- and long-term. Agency problems can worsen to the extent that the investment horizons of a firm's shareholders and its management are misaligned.[820] If management prioritizes short-term results[821] due to pressures to perform along certain metrics,[822] management may fail to assess and provide relevant disclosures on certain climate-related risks,[823] particularly those that are medium- or long-term in nature.[824] Stock-based management compensation has the potential to mitigate this issue, provided that the stock price reflects the

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819 Longer horizons, for example, tend to involve changes in chronic physical risks — sea-level rise, drought, etc. Shorter-term horizons may, instead, be relevant for any increase in acute physical risks such as hurricanes, wildfires, and heatwaves. *See* ING Climate Risk Report 2020, *available at* https://www.ing.com/MediaEditPage/ING-Climate-Risk-report-2020.htm.

820 A stream of literature examines the association of climate-related disclosures with corporate governance structures and managerial characteristics. *See, e.g.,* M. Kılıç and C. Kuzey, *The Effect of Corporate Governance on Carbon Emission Disclosures: Evidence from Turkey*, 11-1 INTERNATIONAL JOURNAL OF CLIMATE CHANGE STRATEGIES AND MANAGEMENT 35-53 (2019). *See also* S. Yunus, E.T. Evangeline, and S. Abhayawansa, *Determinants of Carbon Management Strategy Adoption: Evidence from Australia's Top 200 Publicly Listed Firms*, 31-2 MANAGERIAL AUDITING JOURNAL 156-179 (2016).

821 Henry M. Paulson Jr., *Short-Termism and the Threat From Climate Change*, PERSPECTIVES ON THE LONG TERM: BUILDING A STRONGER FOUNDATION FOR TOMORROW (Apr. 2015), *available at* https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/short-termism-and-the-threat-from-climate-change.

822 Factors including corporate executive compensation and attention to quarterly earnings and reporting are thought to contribute to excessive focus on short-term goals. *See, e.g.*, *Short-Termism Revisited*, *available at* https://corpgov.law.harvard.edu/2020/10/11/short-termism-revisited/.

823 *See How to Take the Long-Term View in a Short-Term World*, MORAL MONEY (FINANCIAL TIMES), (Feb. 25, 2021), *available at* https://www.ft.com/content/5bc1580d-911e-4fe3-b5b5-d8040f060fe1.

824 *See* Richard Mahony and Diane Gargiulo, *The State of Climate Risk Disclosure: A Survey of U.S. Companies* (2019) (A recent survey conducted on the members of the Society for Corporate Governance (SCG) about the state of U.S. climate risk disclosures revealed that tying executive compensation to progress on climate goals is beginning to emerge among some companies, but it is far from a common practice. Only 6% of respondents said their board linked compensation to climate objectives.), *available at* https://www.dfinsolutions.com/sites/default/files/documents/2019-10/TCFD_II_Climate_Disclosure_V10_revisedFINAL.pdf.

value of the company in the long-run. However, under the current regime, certain climate-related risks may be unobservable or obfuscated, and hence not fully reflected into stock prices, giving short-term-focused managers an incentive to initiate or continue projects exposed to these risks to maximize their compensation at the expense of long-term shareholder value.

Impediments to voluntary climate-related disclosures can also be exacerbated due to the uncertainty and complexity of climate-related risks and the multidimensional nature of the information being disclosed. First, this uncertainty and complexity may lead to misrepresentation of disclosures, which, as discussed previously, violates a condition for the full revelation of material information in a voluntary reporting environment. The complexity of these risks has led to many types of methodologies, metrics, and statements that can be provided to communicate potential economic impacts and risks.[825] This multitude of choices to represent such risks may therefore allow managers substantial discretion to selectively choose metrics that appear favorable. If this managerial discretion is more difficult to be verified by investors, managers may face lower costs for their misreporting. Moreover, the complex and multidimensional nature of certain climate-related risks may further impede investors' abilities to detect misreporting. This could lead to a cheap-talk equilibrium, which, as previously discussed, could lead to climate-related information remaining undisclosed.

The uncertainty and complexity of climate-related risks may also be an impediment to voluntary disclosure if managers are less able to anticipate how investors may respond to such

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[825] *See,* e.g., TCFD, *Recommendations of the Task Force on Climate-Related Financial Disclosures,* at 16 (June 2017), *available at* https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf.

disclosures. As noted above, predictable investor responses to disclosures is one of the key assumptions necessary for the full revelation of material information in a voluntary reporting environment.[826] Uncertainty in responses means mandatory disclosures have the potential to improve information provision to investors. The challenge in anticipating investor responses to climate-related disclosure may stem, in part, from the fact that the impact of these risks on registrants' financial outcomes and operations can vary significantly. This challenge may be compounded by the uncertainty surrounding the future path of climate change and the evolving nature of the science and methodologies measuring their economic impacts.[827] The uncertainty and complexity of climate-related risks are likely to cause substantial heterogeneity with respect to investors' interpretation of related disclosures and their understanding of firms' exposures to such risks, resulting in heterogeneous and unpredictable investor responses. In this circumstance, managers may prefer to withhold applicable disclosures.[828]

Due to these impediments, companies may not report (or may report only limited amounts of) relevant climate-related information, and hence, the stock price that investors

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[826] In other words, this assumes that all investors uniformly interpret (and react to) managers' disclosures or their absence and that investors' interpretation and reaction is known to managers. *See, e.g.*, A. Beyer, D.A. Cohen, T.Z. Lys, and B.R. Walther, *The Financial Reporting Environment: Review of the Recent Literature*, 50 (2) JOURNAL OF ACCOUNTING AND ECONOMICS 296-343 (2010).

[827] *See,* e.g., TCFD, Recommendations of the Task Force on Climate-Related Financial Disclosures, at 16 (June 2017), *available at* https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFD-Report-11052018.pdf.

[828] *See,* e.g., M. J. Fishman and K. M. Hagerty, *Mandatory versus Voluntary Disclosure in Markets With Informed and Uninformed Customers*, 19 (1) JOURNAL OF LAW, ECONOMICS, & ORGANIZATION 45-63 (2003); P. Bond and Y. Zeng, Si*lence Is Safest: Information Disclosure When the Audience's Preferences Are Uncertain* (forthcoming), JOURNAL, OF FINANCIAL ECONOMICS (2021); D. Butler, and D. Read, *Unravelling Theory: Strategic (Non-) Disclosure of Online Ratings*, 12 GAMES 73(2021).

observe may not reflect the companies' true exposures to physical and transition risks.[829] Even when companies assess and disclose climate-related risks, reporting fragmentation can present substantial obstacles to investors in processing this information.[830] This is because disclosures currently vary considerably in terms of coverage, location, and presentation across companies, making it difficult for investors to navigate through different information sources and filings to identify, compare, and analyze climate-related information.[831] Moreover, these disclosures are often vague and boilerplate, creating further challenges for investors.[832] While it may seem that more information is always better, when the incentives of investors and managers diverge, evidence suggests such amorphous statements could reduce the quality of communication both in theory[833] and in practice.[834]

The current regulatory regime leaves substantial uncertainty around the type of climate-related information that should be disclosed and how it should be presented. Multiple third-party

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829 *See* J.A. Bingler, M. Kraus, and M. Leippold*, Cheap Talk and Cherry-Picking: What Climate Bert Has to Say on Corporate Climate Risk Disclosures* (2021) *available at*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3796152.

830 Carbon Disclosure Project ("CDP"), *Pitfalls Of Climate-Related Disclosures* (2020)*, available at* Pitfalls-of-Climate-Related-Disclosure.pdf (rackcdn.com).

831 *See* SASB, *The State Of Disclosure: An Analysis of the Effectiveness of Sustainability Disclosure in SEC Filings*, (2017), *available at* https://www.sasb.org/knowledge-hub/state-of-disclosure-2017/.

832 The SASB reports that about 50% of SEC registrants provide generic or boilerplate sustainability information in their regulatory filings.

833 *See* Vincent P. Crawford and Joel Sobel, *Strategic Information Transmission*, ECONOMETRICA: JOURNAL OF THE ECONOMETRIC SOCIETY 1431-1451 (1982).

834 *See, e.g.*, Robert Forsythe, Russell Lundholm and Thomas Rietz, *Cheap Talk, Fraud, and Adverse Selection In Financial Markets: Some Experimental Evidence*, 12 (3) THE REVIEW OF FINANCIAL STUDIES 481–518 (July 1999), *available at* https://doi.org/10.1093/revfin/12.3.0481.

climate reporting frameworks have emerged to try to fill this reporting gap.[835] Due to the voluntary nature of third-party frameworks, however, companies often disclose some but not all components, and the components that are disclosed may not be the same across companies.[836] The location, format, and granularity of the information provided may also vary, although the substance may be similar. This has resulted in considerable heterogeneity in firms' existing disclosure practices.[837] The wide range of reporting practices and frameworks makes it difficult to assess how much material climate-related information firms currently are disclosing and may leave opportunities for companies to omit unfavorable information.[838] Some studies point to the potential for substantial underreporting of material climate-related information within the current voluntary reporting regime.[839]

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835 The TCFD, the SASB, the GRI, the Principles for Responsible Investment, the PCAF, and the CDP (among others), have all developed standards and systems that aim to help firms and investors identify, measure, and communicate climate-related information and incorporate that information into their business practices. Multiple frameworks have emerged, in part, because each seeks to provide different information or fulfill different functions when it comes to disclosing information related to climate-related risks or other ESG factors that may be important to investors.

836 *See* Climate Risk Disclosures & Practices, *available at* https://climatedisclosurelab.duke.edu/wp-content/uploads/2020/10/Climate-Risk-Disclosures-and-Practices.pdf.

837 *See* Section IV.A.5. A recent survey of members of the Society for Corporate Governance (SCG) regarding the state of U.S. climate risk disclosures revealed that companies are using many of the existing frameworks to present emissions, environmental data, and other information on ESG issues. Many of the respondents indicated that their companies are now reporting using CDP, GRI, SASB and other standards, with corporate registrants expressing a desire for greater clarity regarding how to make adequate climate disclosures. The survey results indicate that many companies are grappling with how best to provide useful information to investors regarding complex and interrelated risks. *See* Richard Mahony and Diane Gargiulo, *The State of Climate Risk Disclosure: A Survey of U.S. Companies* (2019), *available at* https://www.dfinsolutions.com/sites/default/files/documents/2019-10/TCFD_II_Climate_Disclosure_V10_revisedFINAL.pdf.

838 *See* Lee Reiners and Charlie Wowk, *Climate-Risk-Disclosures-and-Practices* (2021), *available at* https://climatedisclosurelab.duke.edu/wp-content/uploads/2020/10/Climate-Risk-Disclosures-and-Practices.pdf.

839 A past study using ESG disclosure data in Bloomberg on US-listed firms, found that, on average, from 2007 to 2015, firms provided only about 18% (median: 13%) of the prescribed SASB disclosure items (which serve as benchmark for financially material disclosures). *See* J. Grewal, C. Hauptmann and G. Serafeim, *Material Sustainability Information and Stock Price Informativeness*, JOURNAL OF BUSINESS ETHICS (Forthcoming) (2020), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2966144.

The proposed rules aim to address these market failures by requiring more specificity around the way registrants disclose climate-related risks and their impacts on business activities and operations in the short, medium, and long-term. By requiring comprehensive and standardized climate-related disclosures along several dimensions, including disclosure on governance, business strategy, risk management, financial statement metrics, GHG emissions, and targets and goals, the proposed rules would provide investors with climate-related information that is more comparable, consistent, and reliable and presented in a centralized location.

C. Benefits and Costs

Below we discuss the anticipated economic effects that may result from the proposed rules. Where possible, we have attempted to quantify these economic effects, including the benefits and costs. In many cases, however, we are unable to reliably quantify these potential benefits and costs. For example, existing empirical evidence does not allow us to reliably estimate how enhancements in climate-related disclosure affect information processing by investors or firm monitoring. Nevertheless, there is a large body of studies examining the effects of corporate disclosure in general, as well as a subset focusing on sustainability-related disclosures (e.g. ESG- or CSR-related disclosures).[840] We draw on existing empirical evidence and theoretical arguments from these studies to the extent they are applicable to disclosures on climate-related information specifically.

Similarly, we qualitatively describe the factors that may affect disclosure costs but we are unable to accurately quantify these costs. Costs related to preparing climate-related disclosures

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[840] *See* H.B. Christensen, L. Hail, and C. Leuz, *Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review*, REVIEW OF ACCOUNTING STUDIES 1-73 (2021).

are generally private information known only to the issuing firm, hence such data are not readily available to the Commission. There is also likely considerable variation in these costs depending on a given firm's size, industry, complexity of operations, and other characteristics, which makes comprehensive estimates difficult to obtain.

We encourage commenters to provide us with relevant data or empirical evidence related to the costs of preparing climate-related disclosures and, more generally, to provide us with any type of data that would allow us to quantitatively assess the costs and benefits of the proposed rules.

1. Benefits

The primary benefit of the proposed rules is that investors would have access to more comparable, consistent, and reliable disclosures with respect to registrants' climate-related risks. As discussed in the previous sections, investors currently face obstacles in accessing comparable, consistent, and reliable climate-related information due to a combination of registrants not disclosing this information at all, or registrants disclosing this information but with varying degrees of coverage and specificity and in varying formats and locations, including company websites, standalone reports, and SEC filings.

Investors are expected to benefit from the required disclosures given that material climate-related information would be provided to the market more consistently across registrants of different sizes and filer status, whether domestic or foreign issuers, and regardless of industry. Investors are also expected to benefit from the more consistent content of the disclosures. Specifically, the proposed rules would enhance comparability by requiring registrants to provide disclosures on a common set of qualitative and quantitative climate-related disclosure topics in their filings.

In addition to the standardized content, investors are expected to benefit from a common location of the disclosures in regulatory filings. The proposed rules would require registrants to place all relevant climate-related disclosures in Securities Act or Exchange Act registration statements and Exchange Act annual reports in a separately captioned "Climate-Related Disclosure" section, or alternatively, to incorporate by reference from another section, such as Risk Factors, Description of Business, or MD&A. By mandating that standardized climate-related information be disclosed, and requiring it to be placed in a centralized location within regulatory filings, the proposed rules could reduce investors' search costs and improve their information-processing efficiency. These factors can also lead to positive information externalities – as more firms disclose how measures of climate risk affect their business operations, investors would gain a better understanding of how those same climate risks may affect other similar firms.[841]

Furthermore, by requiring this information to be *filed* with the Commission as opposed to posted on company websites or *furnished* as exhibits to regulatory filings, the proposed rules are expected to improve the reliability of information provided to investors moving forward.[842] Several commenters indicated that the treatment of climate-related disclosures as filed would

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[841] One study documents how investors can use information from one firm to make inferences of other similar firms in the context of earnings announcements. *See* supra note 811.

[842] By proposing to treat the proposed required climate-related disclosures as "filed," we are therefore subjecting them to potential liability under Exchange Act Section 18, except for disclosures made on Form 6-K. The proposed filed climate-related disclosures would also be subject to potential Section 11 liability if included in or incorporated by reference into a Securities Act registration statement. *See* Section II.C.4 (discussions within).

help improve investor confidence in the accuracy and completeness of such disclosures.[843] Recent academic work provides evidence of firms' engagement in obfuscation and other misleading efforts (so-called "greenwashing")[844] to manipulate the set of information available on corporate websites and sustainability reports with the goal of attaining higher ESG ratings, which are relied upon, in particular, by unsophisticated investors for the value of institutional certification.[845] Direct disclosures may also reduce reliance on these ESG ratings, which are not necessarily standardized nor fully transparent with respect to their methodologies. In fact, several studies found low correlations of classifications across ESG providers.[846] Additionally, a study

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843 *See* Section II.H.k.

844 A review of several academic papers reveal that there is no universally accepted definition of "greenwashing." Though the term "greenwashing" is often used in industry discussions regarding ESG, the Commission does not define "greenwashing" in this proposal, rules, or form amendments. Greenwashing is typically described as the set of activities conducted by firms or funds to falsely convey to investors that their investment products or practices are aligned with environmental or other ESG principles.

845 *See* Ruoke Yang, *What Do We Learn From Ratings About Corporate Social Responsibility?*, R&R JOURNAL OF FINANCIAL INTERMEDIATION (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3165783.

846 Florian Berg, Julian Kölbel, Roberto Rigobon, *Aggregate Confusion: The Divergence of ESG Ratings*, MIT SLOAN SCHOOL (Working Paper 5822-19) (May 17, 2020), *available at* https://ssrn.com/abstract=3438533 or http://dx.doi.org/10.2139/ssrn.3438533. Authors found that the correlations between six different ESG ratings are on average 0.54, and range from 0.38 to 0.71, while the correlations between credit ratings were 0.99. *See also* OECD, *OECD Business and Finance Outlook 2020*, SUSTAINABLE AND RESILIENT FINANCE (Sept. 29, 2020), *available at* https://www.oecd.org/daf/oecd-business-and-finance-outlook-26172577.htm. OECD analyzed different rating providers, such as Bloomberg, MSCI and Refinitiv and found wide differences in the ESG ratings assigned, with an average correlation of 0.4. When OECD analysis then compared ESG ratings with the issuer credit rating by major providers, it found that credit scores for selected issuers vary much less. *See also* International Monetary Fund, Global Financial Stability Report (Oct. 2019), *available at* https://www.imf.org/en/Publications/GFSR/Issues/2019/10/01/global-financial-stability-report-october-2019. It found that only 37% of Lipper ethical funds also carry a sustainable designation by Bloomberg.

suggested that models and metrics used by ESG providers for appropriately classifying funds are not always transparent and consistent across ESG providers.[847]

As discussed in Section IV.B.1, surveys of institutional investors indicate that climate risk is one of the most prominent issues driving their investment decisions and engagements with companies. Evidence from the stock market response appears consistent with this, with increased mandatory ESG disclosure being associated with aggregate stock price movement.[848] Such stock price effects tend to display cross-sectional heterogeneity with, for example, firms disclosing large GHG emissions experiencing price declines.[849] Similar effects have also been observed in derivatives markets.[850] Investor responses in real estate markets potentially affected by physical risks,[851] as well as revealed preferences from flows into mutual funds with environmental goals in their investment mandates,[852] provide further evidence of investors' interest in disclosures pertaining climate risks. Taken together, the mandatory and standardized nature of the proposed climate-related disclosures could benefit investors by improving their ability to assess these risks

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[847] *See* OECD Business and Finance Outlook 2020, *Sustainable and Resilient Finance* (Sept. 29, 2020); H. Friedman, M. Heinle, and I. Luneva, *A Theoretical Framework for Environmental and Social Impact Reporting* (Working Paper) (2021).

[848] *See* J. Grewal, E. J. Riedl, and G. Serafeim, *Market Reaction to Mandatory Nonfinancial Disclosure*, 65 (7) MANAGEMENT SCIENCE 3061-3084 (2019).

[849] *See* V. Jouvenot and P. Kruger, *Mandatory Corporate Carbon Disclosure: Evidence from a Natural Experiment* (Working Paper) (2021); P. Bolton and M. Kacperzcyk, *Signaling through Carbon Disclosure* (Working Paper) (2020).

[850] E. Ilhan, Z. Sautner, G. Vilkov, *Carbon Tail Risk*, 34 (3) REVIEW OF FINANCIAL STUDIES 1540-1571 (2021).

[851] *See supra* note 802.

[852] *See supra* note 804.

and their impact on registrants' financial condition and operations, thereby allowing investors to make better-informed investment decisions and enhancing investor protection.

Improving and standardizing climate disclosures also could mitigate adverse selection problems that may arise in the presence of asymmetric information[853] by making more accurate and standardized information available to the general public.[854] Improved disclosure could make it easier for investors to process information more effectively and improve the estimation of firm's future cash flows, leading to more accurate firm valuation.[855] In particular, the enhanced disclosures may yield further benefits for the disclosures of financial firms. Because financial firms can have significant exposures to climate-related risks through their portfolio companies, any enhancements in the portfolio companies' disclosures can subsequently be leveraged by these financial firms in assessing the risks to their portfolios and to the firm as a whole.[856]

Another benefit of the proposed rules is that it could allow firm's shareholders to better monitor management's decisions and mitigate certain agency problems stemming from

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853 Asymmetric information occurs when one party to an economic transaction possesses greater material knowledge than the other party. Adverse selection occurs when the more knowledgeable party only chooses to transact in settings that, based on their private information, is advantageous for them. Less informed parties aware of their informational disadvantage might be less inclined to transact at all for fear of being taken advantage of. *See* George Akerlof, *The Market for 'Lemons, Quality Uncertainty and the Market Mechanism*, 84 (3) QUARTERLY JOURNAL OF ECONOMICS 488-500 (1970).

854 *See* R. E Verrecchia, Essays on Disclosure, 32 *Journal of Accounting and Economics* 1-3, 97-180 (2001).

855 *See* R. Lambert, C. Leuz, and R. E. Verrecchia, *Accounting Information, Disclosure, and the Cost of Capital*, 45 (2) JOURNAL OF ACCOUNTING RESEARCH 385-420 (2007).

856 In 2021, the CDP coordinated with 168 financial institutions, with a combined AUM of $17 trillion USD, to engage over 1,300 companies to request climate-related information, among other topics. *See* CDP Non-Disclosure Campaign: 2021 Results, *available at* https://cdn.cdp.net/cdp-production/cms/reports/documents/000/006/069/original/CDP_2021_Non-Disclosure_Campaign_Report_10_01_22_%281%29.pdf?1642510694.

management's discretionary choices with respect to climate disclosure. Agency problems could occur when management act opportunistically in their own self-interest at the expense of shareholders by disclosing only certain climate-related information at their discretion. As previously discussed in Section IV.B.2.b, management may be motivated to selectively disclose only climate-related information,[857] while omitting harder to verify risks.[858] In the context of climate-related risks, agency issues may be exacerbated by the potential conflicts between short-term profitability and long-term climate risk horizons[859] and the misalignment of interests and incentives between long-term shareholders and management,[860] whereby the latter may unduly

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[857] *See supra* note 829 (A recent study, for example, shows that absent mandatory requirements from regulators, voluntary disclosures following third-party frameworks are generally of poor quality and that firms making these disclosures cherry-pick to report primarily non-material climate risk information.).

[858] *See* World Economic Forum, *How to Set Up Effective Climate Governance on Corporate Boards: Guiding Principles and Questions* (2019), *available at* https://www3.weforum.org/docs/WEF_Creating_effective_climate_governance_on_corporate_boards.pdf. In addition, there are a number of academic studies examining the association of climate-related disclosures with corporate governance structures and managerial characteristics. *See*, *e.g.*, M. Kılıç and C. Kuzey, *The Effect of Corporate Governance on Carbon Emission Disclosures: Evidence from Turkey*, 11-1 INTERNATIONAL JOURNAL OF CLIMATE CHANGE STRATEGIES AND MANAGEMENT 35-53 (2019); S. Yunus, E.T. Evangeline, and S. Abhayawansa, *Determinants of Carbon Management Strategy Adoption: Evidence from Australia's Top 200 Publicly Listed Firms*, 31-2 MANAGERIAL AUDITING JOURNAL 156-179 (2016); Caroline Flammer, Michael W. Toffel, and Kala Viswanathan, *Shareholder Activism and Firms' Voluntary Disclosure of Climate Change Risks*, 42-10 STRATEGIC MANAGEMENT JOURNAL 1850–1879 (Oct. 2021).

[859] Physical and transition climate risks can materialize over time horizons ranging from the immediate future to several decades. Long horizons, for example, tend to involve changes in chronic physical risks — (sea-level rise, drought, etc.). Shorter-term horizons may, instead, be relevant for increase in acute physical risks such as hurricanes, wildfires, and heatwaves. *See* ING Climate Risk Report 2020, *available at* https://www.ing.com/2021-Climate-Report.htm.

[860] A report by the Environmental Audit Committee of the UK House of Commons on Greening Finance, issued in June 2018, found that short-termism is a pervasive problem in corporate decision making and leaves business ill-equipped to consider and incorporate long term risks, such as climate change and sustainability. *See* Envtl. Audi Comm., House of Commons, U.K. Parliament, *Greening Finance: Embedding Sustainability in Financial Decision Making* (June 6, 2018), *available at* https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/1063/106302.htm.

focus on short-term results[861] given pressures to demonstrate performance.[862] Under the current regime, many climate-related risks may be unobservable or obfuscated, giving short-term-focused managers an incentive to initiate projects exposed to these risks without properly informing investors.

Agency problems might be exacerbated by registrants' use of boilerplate language or selective disclosure (i.e. "cherry picking"),[863] which might reduce transparency and impair investors' ability to effectively monitor firm management. The lack of a standardized disclosure framework could make it easier for registrants to forego the use of certain metrics or scopes and omit information that might otherwise indicate shortcomings.[864] Previous studies have found that more detailed reporting can mitigate agency problems as it facilitates the scrutiny and discipline of firm management, allowing investors to monitor firms' operations more closely and thus evaluate whether managers have acted in the best interests of shareholders.[865] By requiring

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[861] *See* Henry M. Paulson Jr., *Short-Termism and the Threat From Climate Change, Perspectives on the Long Term: Building a Stronger Foundation for Tomorrow* (Apr. 2015), *available at* https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/short-termism-and-the-threat-from-climate-change.

[862] Factors including corporate executive compensation and attention to quarterly earnings and reporting are thought to contribute to excessive focus on short-term goals. *See, e.g.,* https://corpgov.law.harvard.edu/2020/10/11/short-termism-revisited.

[863] *See supra* note 806; see also Morningstar, *Corporate Sustainability Disclosures* (2021), *available at* https://www.morningstar.com/en-uk/lp/corporate-sustainability-disclosures. ("Companies will disclose the good and hide the bad while disclosure remains voluntary.").

[864] *See* JE Fisch, *Making Sustainability Disclosure Sustainable*, 107 GEORGETOWN LAW JOURNAL 923–966 (2019). *See* Climate Risk Disclosures & Practices: Highlighting the Need for a Standardized Regulatory Disclosure Framework to Weather the Impacts of Climate Change on Financial Markets, (2020), *available at* https://climatedisclosurelab.duke.edu/wp-content/uploads/2020/10/Climate-Risk-Disclosures-and-Practices.pdf.

[865] *See* C. Kanodia and D. Lee, *Investment and Disclosures: The Disciplinary Role of Performance Reports*, 36(1) JOURNAL OF ACCOUNTING RESEARCH 33-55 (1998); P. Healy, and K. Palepu, *Information Asymmetry, Corporate Disclosure, and the Capital Markets: A Review of the Empirical Disclosure Literature*, 31 (1-3) JOURNAL OF ACCOUNTING AND ECONOMICS 405-440 (2001); Huang Pinghsun and Yan Zhang, *Does Enhanced*

registrants to provide comprehensive and detailed climate-related information to investors, the proposed rules are expected to reduce the likelihood of unreliable or boilerplate disclosures. This can enable investors to better monitor firm's management, reducing agency problems and ultimately strengthening investor protection. In the following sections, we discuss how specific aspects of the proposed rules could contribute to the aforementioned benefits.

The proposed rules would mandate more detailed and comprehensive disclosure with respect to climate-related risks. More consistent, comparable, and reliable disclosures could lead to capital market benefits in the form of improved liquidity, lower costs of capital, and higher asset prices (or firm valuations).[866] These benefits would stem from reductions in information asymmetries brought about by the required disclosure of climate-related information, both among investors and between firms and their investors. In the first case, less information asymmetry among investors could mitigate adverse selection problems by reducing the informational advantage of informed traders. This is likely to improve stock liquidity which, in turn, can attract more investors, thereby reducing the cost of capital. In the second case, less information asymmetry between firms and their investors could allow investors to better estimate future cash flows, which could reduce investors' uncertainty, as well as the risk premium they demand, thus lowering the costs of capital for registrants. Economic theory illustrates how, all else equal, a drop in the cost of capital leads to a boost in equity valuation, which can further benefit investors.

Disclosure Really Reduce Agency Costs? Evidence from the Diversion of Corporate Resources, 87(1) THE ACCOUNTING REVIEW, 199-229 (2012); R. M. Bushman and A. J. Smith, *Financial Accounting Information and Corporate Governance*, 32 (1-3) JOURNAL OF ACCOUNTING AND ECONOMICS 237-333 (2001); R. Lambert, C. Leuz, and R. E. Verrecchia, *Accounting Information, Disclosure, and the Cost of Capital*, 45 (2) JOURNAL OF ACCOUNTING RESEARCH 385-420 (2007).

[866] *See* Section IV.D for more information on capital market benefits.

a. Disclosure Regarding Climate-Related Risks and their Impacts on Strategy, Business Model, and Outlook

The proposed rules would require registrants to identify their climate-related risks that are reasonably likely to have a material impact on the registrant's business or consolidated financial statements over the short, medium, and long-term and describe the actual and potential impacts of those risks on its strategy, business model, and outlook. Registrants would specifically be required to disclose impacts on, or any resulting significant changes made to, their: (i) business operations, including the types and locations of its operations; (ii) products or services; (iii) supply chain or value chain; (iv) activities to mitigate or adapt to climate-related risks; and (v) expenditures for research and development.

If, as part of its net emissions reduction strategy, a registrant uses carbon offsets or RECs, the proposed rules would require it to disclose specific information around the role that carbon offsets or RECs play in the registrant's climate-related business strategy. If a registrant uses an internal carbon price, the proposed rules would require it to disclose information around the boundaries for measurement of overall CO_2e, the price per metric ton of CO_2e, as well as how the total price is estimated to change over time, if applicable. Similarly, to the extent that the registrant uses analytical tools such as scenario analysis, the proposed rules would require a description of those analytical tools, including the assumptions and methods used.

The specific disclosures required by the proposed rules are expected to improve investors' understanding of what the registrant considers to be the relevant short-, medium-, and long-term climate-related risks that are reasonably likely to have a material impact on its business, taking into consideration the useful life of the organization's assets or infrastructure and the fact that climate-related risks may manifest themselves over the medium and longer terms. Compared to the baseline, investors would be better able to identify and assess how climate-related risks may affect a registrant's businesses, strategy, and financial planning in several areas, including products and services, supply chain and/or value chain, adaptation and mitigation activities, investment in research and development, operations (including types of operations and location of facilities), acquisitions or divestments, and access to capital. Investors would gain insight into how climate-related risks may serve as an input to the registrant's financial planning process and the time period(s) used for this process.

For example, investors may gain better insights into the registrant's estimated costs of any operational changes expected to be implemented to achieve emission reduction targets. Alternatively, investors may gain valuable information on how certain climate events may impact the registrant's property, workforce, or its production schedule across the different physical sites where the registrant conducts business. Adverse climate-related events may impact the useful lives and/or valuation reserves of balance sheet assets. For example, sea level increases and other climate related patterns may adversely impact the estimated useful lives of coastal facilities. Similarly, more extreme weather patterns may adversely impact agricultural regions and the value of related equipment and lands. This information is expected to be useful for investors in assessing how climate-related risks are managed, and whether and how these risks may affect a registrant's financial condition and results of operations. The required disclosure around the role that carbon offsets or RECs play in the registrant's climate-related business strategy could help investors better understand that strategy, including how resilient it is to changes in costs or the availability or value of offsets or RECs over the short, medium and long-term. The required disclosures around internal carbon price, when used by a registrant, could provide investors with more standardized and detailed information regarding how the registrant developed a particular business strategy and help investors assess whether a registrant's internal carbon pricing practice is reasonable and whether its overall evaluation and planning regarding climate-related factors is sound. The required disclosure around the assumptions and methods used by a registrant when employing analytical tools or conducting scenario analysis can improve investors' assessment of the resiliency of a registrant's strategy and business model in light of foreseeable climate-related risks and improve investors' ability to compare said resiliency among registrants.

The proposed requirement to identify material climate-related risks over the short-, medium-, and long-term could also help mitigate agency problems deriving from the potential misalignment of planning horizons between the firm's shareholders and its managers. The information required to be disclosed about the firm's business operations, products or services, supply or value chain, activities to mitigate or adapt to climate-related risks, and expenditure for research and development could allow investors to assess how climate-related issues may impact the registrant's financial performance (e.g., revenues, costs) and financial condition(e.g., assets, liabilities). These disclosures should allow investors to gain valuable insights on how resources are being used by management to mitigate climate-related risks and to facilitate investors' evaluation of whether managers are taking appropriate steps to address such risks.

b. Governance Disclosure

The proposed rules would require a registrant to disclose information concerning the board's oversight of climate-related risks as well as management's role in assessing and managing those risks. The proposed rules would require a registrant to disclose whether any member of its board of directors has expertise in climate-related matters and the processes and frequency by which the board discusses climate-related factors. When describing management's role in assessing and managing climate-related factors, a registrant would be required to disclose whether certain management positions are responsible for assessing and managing climate-related factors and the processes by which the responsible managers are informed about and manage climate-related factors.

The disclosures required by the proposed rules should enable investors to better understand how the firm is informed about climate-related factors and how frequently the firm considers such factors as part of its business strategy, risk management, and financial oversight. Investors would be expected to gain better information around whether the organization has assigned climate-related responsibilities to management-level positions or committees and, if so, whether those responsibilities include assessing and/or managing climate-related risks. As a result, investors may be better able to understand and evaluate the processes by which management is informed about and monitors climate-related risks. For example, investors may be better positioned to assess whether and how the firm's board and management consider climate-related risks when reviewing and guiding business strategy and major plans of action, when setting and monitoring implementation of risk management policies and performance objectives, and when reviewing and approving annual budgets.

With detailed information about climate expertise among the registrant's directors, investors could more effectively evaluate the firm's governance practices related to the identification and management of climate-related risks. In particular, investors may be able to exercise closer oversight of management's actions as they assess implementation of risk management policies and performance objectives, review and approve annual budgets, and oversee major capital expenditures, acquisitions, and divestitures.

c. Risk Management Disclosure

The proposed rules would require registrants to describe their processes for identifying, assessing, and managing climate-related risks. This includes disclosure on how registrants assess materiality, whether they consider likely future regulatory actions, how they prioritize, mitigate, or adapt to climate-related risks, and overall how climate-related factors are integrated into the registrants' risk management systems or processes. Registrants would also be required to provide detailed descriptions on any transition plans,[867] as applicable, including relevant targets and metrics, how physical and transition risks are managed, and actions taken and progress made toward the plan's targets or goals.[868]

The disclosures required by the proposed disclosures could inform investors regarding how proactive and diligent registrants may be with respect to climate-related risks. Investors can use this information to acquire a more detailed understanding of how resilient registrants' risk management systems may be towards climate-related risks, which could contribute to better-informed investment or voting decisions. These disclosures could allow investors to better monitor and assess whether registrants have in place adequate risk management systems and whether they are aligned with investor preferences.

Conversely, investors may be better able to detect whether certain registrants' risk management systems would fail to account for certain types of climate factors such as change in consumer preferences, adjustments of business models, and technological challenges or

[867] Transition plans would be defined as a registrant's strategy and implementation plan to reduce climate-related physical and transition risks and increase climate-related opportunities, including by reducing its own emissions. If the registrant has made a public commitment to reduce its GHG emissions by a certain date, it must disclose such date and its plan to achieve its public commitment.

[868] *See* Section IV.C.1.f for a more detailed discussion of the potential benefits of targets and goals disclosure.

innovations, which may have implications on companies' operations and financial conditions. These disclosures may also allow investors to assess whether registrants are evaluating these risks over specific time horizons, which may be particularly relevant in cases in which management may be more concerned with short-term performance while neglecting longer term risks. Accordingly, this provision could help address agency problems related to the misalignment of planning horizons.

d. Financial Statement Metrics

The proposed rules would require registrants to disclose certain disaggregated climate-related metrics in its financial statements under the following categories: (i) financial impact metrics; (ii) financial expenditure metrics; and (iii) financial assumptions. The proposed rules would require a registrant to disclose the impact of climate-related events (severe weather events and other natural conditions and physical risks identified by the registrant) and transition activities (including transition risks identified by the registrant) on its consolidated financial statements, if the disclosure threshold is met. For each type of metric, the provisions would require the registrant to disclose contextual information to enable the reader to understand how it derived the metric, including a description of significant inputs and assumptions used to calculate the specified metrics, thus providing the necessary transparency for facilitating investors' understanding and peer comparisons. To avoid potential confusion and to maintain consistency with the rest of the financial statements, the proposed financial statement metrics would be required to be calculated using financial information that is consistent with the scope of the rest of the registrant's consolidated financial statements included in the filing. The proposed rules would specify the basis of calculation for the climate-related financial statement metrics and clarify how to apply these accounting principles when calculating the climate-related financial statement metrics.

With respect to financial impact metrics, the proposed rules would require a registrant to disclose the impacts arising from climate-related events, including physical risks identified by the registrant and severe weather events and natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. In addition to physical risks, registrants also would be required to disclose the financial impact of transition activities (including transition risks identified by the registrant), such as efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks on any relevant line items in the registrant's consolidated financial statements. The proposed rule would require registrants to reflect the impact of the climate-related events or transition activities on each line item of the registrant's consolidated financial statements (*e.g.*, line items of the consolidated income statement, balance sheet, or cash flow statement) unless the aggregate impact of the events and transition activities is less than one percent of the total line item. By exempting such line item reporting when the aggregate impact of the events is less than one percent, the proposed rule would reduce overall costs for firms associated with disclosures for instances where the impact is likely to be quite small, while providing assurance to investors that more significant impacts are reflected in line item reporting.[869]

We expect that the proposed financial statement metrics impact would provide additional transparency into the nature of a registrant's business and the significance of many of the climate-related risks and impacts on its overall financial condition. Such disclosures are expected

[869] The choice of a one percent threshold is consistent with what the Commission currently uses in other contexts for disclosure of certain items within the financial statements and without (*e.g.*, §§ 210.5-03.1(a), 210.12-13, and 229.404(d)).

to provide investors with valuable insights into potential changes to, among others, revenue or costs from disruptions to business operations or supply chains; impairment charges and changes to the carrying amount of assets due to the assets being exposed to physical risks; revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract and; operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials. Separately reporting the financial statement impacts from the specified climate-related events and transition activities could improve comparability of both the registrant's year-to-year disclosure and between the disclosures of different registrants. Because the risks presented by the climate-related events and transition activities may be correlated across different registrants and across time, future climate-related risks could manifest in such a way that a large subset of registrants are affected, making them potentially a non-diversifiable risk. In this case, separate financial impact disclosures could inform investors of their exposure to these risks not just for a single registrant, but across all the registrants in their portfolios. Such disclosures could be beneficial as they would be informative of both individual registrant exposures to climate-related risks, and the level of climate-related risks in the aggregate, thus allowing investors to more effectively evaluate and manage the risk of their entire portfolio. . Moreover, to the extent that registrants are not aware of climate-related risks in the aggregate, these disclosures would allow for a greater understanding of the climate-related risks they face, providing them the opportunity to make more informed investment decisions taking into account such risks.

With respect to financial expenditure metrics, the proposed rules would require a registrant to disclose the positive and negative impacts associated with the same climate-related events and transition activities as the proposed financial impact metrics. The expenditure metrics would require a registrant to separately aggregate amounts of expenditure expensed and capitalized costs incurred during the fiscal years presented. For each of those categories, a registrant would be required to disclose separately the amount incurred during the fiscal years presented toward positive and negative impacts associated with the specified climate-related events and to mitigate exposure to transition risks. The expenditure metrics would also be subject to the same disclosure threshold as the financial impact metrics, which should promote consistency and clarity.

Together, these disclosures are expected to provide investors with information about the total expenditure toward or capitalized costs incurred for specified climate-related events. As such, they are expected to increase the resilience of assets or operations, retire or shorten the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations. The proposed rules also would provide investors with information about the amount of expenditure expensed or capitalized costs incurred for climate-related transition activities related, among others, to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, or improve other resource efficiency.

With respect to financial assumptions, the proposed rules would require registrants to disclose whether the estimates and assumptions used to produce the consolidated financial statements were impacted by risks and uncertainties associated with, or known impacts from, severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. If so, the registrant would be required to provide a qualitative description of how such events have impacted the development of the estimates and assumptions used to prepare such financial statements. Similarly, if the estimates and assumptions were impacted by potential transition risks, the registrant would be required to provide a qualitative description of how the development of the estimates and assumptions were impacted by such a transition. We expect that the proposed disclosures would provide transparency to investors on the impact of climate-related events and transition activities on the estimates and assumptions used by the registrant to prepare the financial statements and allow investors to evaluate the reasonableness of the registrant's estimates and assumptions.

Prior evidence shows that existing climate-related disclosures often contain boilerplate language or are "cherry-picked" to present information that is favorable to the company.[870] Accordingly, registrants under the current regulatory regime may choose to provide only brief, qualitative descriptions of certain climate-related factors while omitting concrete, quantitative information on how climate-related factors can impact individual financial statement line items. The proposed rule may mitigate these types of agency problems by requiring registrants to disclose specific, quantitative metrics according to standardized scopes and methodologies, thereby helping investors processing information more effectively.

The proposed financial metrics would be part of the financial statements and thus audited by an independent public accounting firm in accordance with existing Commission rules and PCAOB auditing standards.[871] Subjecting these climate-related disclosures to reasonable assurance pursuant to an audit would require the auditor to assess the risk of material misstatement related to the estimates and judgments, including through evaluation of the method

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[870] *See supra* note 829 and 806.

[871] Such audits could increase the probability of discovering and penalizing any misrepresentation. Since this would increase the expected costs of engaging in misrepresentation, as discussed in Section IV.B.2, this would also be likely to increase the odds of accurate revelation of material information.

of measurement and reasonableness of the assumptions used, and to understand management's risk management processes, including the accuracy of the proposed disclosure, thereby alleviating possible concerns about the data's reliability and comparability, and improving investor confidence in such disclosure.[872] Academic research finds that assurance procedures can increase the relevance and reliability of disclosures, particularly for those involving significant estimation uncertainties. [873]

e. GHG Emissions Metrics

The proposed rules would require all registrants to disclose Scope 1 and Scope 2 GHG emissions. Given the possibility of a transition to a lower-carbon economy, investors and other market participants may be concerned about registrants that have high GHG emissions since these registrants may be more exposed to certain transition risks, such as regulations that restrict emissions or the potential impacts of changing consumer preferences or market conditions. Should a transition to a low-carbon economy gain momentum, registrants with higher amounts of Scope 1 and 2 emissions may be more likely to face sharp declines in cash flows, either from greater costs of emissions or the need to scale back on high-emitting activities, among other reasons, as compared to firms with lower amounts of such emissions.

Understanding the extent of this potential exposure to transition risks could help investors in assessing their risk exposures with respect to the companies in which they invest. Greater

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872 *See* Section II.F.5.

873 *See* M. DeFond and J. A. Zhang, *A Review of Archival Auditing Research*, 58(2-3) *Journal of Accounting and Economics* 275-326 (2014); V.K. Krishnan, *The Association Between Big 6 Auditor Industry Expertise and the Asymmetric Timeliness of Earnings* 20 *Journal of Accounting, Auditing and Finance* 209-228 (2005); W. Kinney and R. Martin, *Does Auditing Reduce Bias in Financial Reporting? A Review of Audit-Related Adjustment Studies*, 13 AUDITING: A JOURNAL OF PRACTICE & THEORY 149-156 (1994); K.B. Behn, J.H. Choi, and T. Kang, (2008), *Audit Quality and Properties of Analyst Earnings Forecasts* 83 THE ACCOUNTING REVIEW 327-349 (2008). Some commenters expressed similar views. *See, e.g.,* Comment Letters from CAQ, Ceres; Impax Asset Management; San Francisco Employees' Retirement System; and UNEP-FI.

consistency in emissions disclosures can further benefit investors as it can facilitate comparisons between the registrants and their peers and assist in understanding the overall risk of their portfolios. As described below, emissions disclosures would also help inform investors about the extent to which a company has been or is following through with its disclosed strategies and transition plans. As further discussed in Section IV.D, we expect this provision to lower uncertainty for investors, thereby reducing the cost of capital. This may make it easier to raise equity and debt, or to obtain loan financing.

Besides the direct risk to cash flows through cost of emissions or the need to scale back on high-emitting activities, such a transition could also cause a registrant's assets to suffer from unanticipated or premature write-downs, devaluations, and/or adverse adjustments in reserves. The proposed Scope 1 and 2 emission disclosures would allow investors to identify registrants whose assets may be more likely to become obsolete or non-performing or lose economic value ahead of their anticipated useful life due to a potential transition to a lower-carbon economy, and more generally allow investors to discern whether certain investments are unlikely to earn the anticipated economic return due to such transition. The proposed disclosures would also allow investors to more closely monitor whether a firm's management is properly accounting for the impairment of such stranded assets to ensure that they are recorded on the balance sheet as a loss of profit and are not carried at more than their recoverable amount. Given the significant possibility that Scope 1 and 2 emissions will affect the valuation of the registrant through impacts on earnings, cost of capital, investor demand, or potentially some other channel, investor protection would be enhanced by requiring disclosure of this information.

Moreover, by specifying that the information should be provided by all registrants, investors would benefit from having access to a more comprehensive set of emissions data against which to measure a registrant's progress in meeting any stated emissions goals or otherwise managing its climate-related risks, as a part of assessing the registrant's overall business and financial condition. In the absence of the proposed rules, some registrants may choose to selectively omit quantitative emissions metrics. The resulting state of disclosures is less meaningful and less transparent, making it significantly more difficult for investors to assess the degree of risk in individual firms, to compare across firms, and to value securities.

As discussed in Section IV.A, some registrants currently report emissions via the EPA's 2009 mandatory Greenhouse Gas Reporting Program.[874] However, the nature of the reporting requirements and the resulting data is more suited to the purpose of building a national inventory of GHG emissions, not of assessing emissions-related risks to individual registrants. Specifically, direct emitters must report their emissions at the facility-level (not registrant-level) and suppliers of certain products must report their "supplied emissions," conditional on these emissions exceeding a specified threshold.[875] In addition, as previously discussed, the EPA emissions data does not allow a clean disaggregation across the different scopes of emissions for a given registrant.[876] From the point of view of an investor seeking greater information regarding a registrant, the EPA's emissions data may be difficult for investors to use, because the data are made public by facility and not by company. While each facility is matched to its parent company, this company may not be the entity registered with the SEC and thus of interest to investors. Taken together, the EPA emissions data is not well suited to enabling investors to fully assess the degree to which each registrant is exposed to transition risks.

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[874] *See* Section IV.A.3.

[875] *See* supra note 737.

[876] *See* Section IV.A.3.

The proposed rules would result in more comprehensive and tailored emissions information by requiring disclosure of Scope 1, Scope 2, and in some cases Scope 3 emissions by registrants in SEC filings. Prior evidence has shown that when information that is already publicly available elsewhere is included within SEC filings, the public becomes more aware of the information.[877] While there are numerous differences with regard to EPA reporting, this evidence suggests that even were these differences not to exist, and the only change were to be inclusion in SEC filings, there would nonetheless be an advantage in improving consistency and reliability and decreasing search costs.

The proposed rules would also provide informational benefits beyond the voluntary disclosure of emissions in sustainability reports. While currently disclosed information reflects investor demand, the overall information disclosed to the market may be biased due to its voluntary nature, in that companies that have more favorable data (e.g., lower emissions) may be more likely to make these voluntary disclosures. Requiring all registrants to provide consistent disclosures, as proposed, would reduce the bias that can result from a voluntary regime. Moreover, as discussed above, locating the information in SEC filings may make it more accessible to investors and contribute to greater consistency and reliability.

Specific provisions are designed to facilitate comparability across registrants and industries. For example, requiring the disclosure of GHG intensity in terms of metric tons of CO_2e per unit of total revenue and per unit of production would allow investors to directly assess the efficiency of the registrant's operations and compare across different industries and firms of varying size. Increased standardization in the reporting of these metrics may allow investors to

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[877] *See* H.B. Christensen, E. Floyd, L.Y. Liu, and M Maffett, *The Real Effects of Mandated Information on Social Responsibility in Financial Reports: Evidence from Mine-Safety Records*, 64 (2-3) JOURNAL OF ACCOUNTING AND ECONOMICS 284-304 (2017).

assess more effectively a registrant's transition risk against that of its competitors. As another example, the proposed rules would require a registrant to set the organizational boundaries for its GHG emissions disclosure using the same scope of entities, operations, assets, and other holdings within its business organization structure as those included in its consolidated financial statements. Requiring a consistent approach would avoid potential investor confusion about the reporting scope used in the financial statements and enhance comparability across registrants,[878] helping investors in assessing a registrant's transition risk against that of its competitors.

The proposal would also require non-SRC registrants to disclose Scope 3 emissions if material or if the registrant has a target or goal related to Scope 3.[879] In addition, specified registrants would also be required to disclose the methodology used to compute emissions, the breakdown of the different GHGs, as well as upstream and downstream activities, and data quality.[880] Scope 3 emissions GHG emissions can represent the majority of the carbon footprint for many companies, in some cases as high as 85% to 95%.[881] For example, according to Morgan Stanley Capital International (MSCI), the Scope 3 emissions of the integrated oil and

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878 Unlike the GHG Protocol, which currently provides different options for setting organizational boundaries, the proposed rules would require that the scope of consolidation and reporting be consistent for financial data and GHG emissions data.

879 The proposed rules include a safe harbor for Scope 3 emissions disclosure from certain forms of liability under the federal securities laws.

880 In calculating Scope 3 emissions, registrants have the flexibility to choose a methodology they deem fit, however, the specific methodology must be disclosed. Estimates or ranges are permitted. Emissions reporting must be presented as CO_2e as well as disaggregated into the different types of GHGs.

881 *See* Eric Rosenbaum, Climate experts are worried about the toughest carbon emissions for companies to capture (Aug. 18, 2021) *available at* https://www.cnbc.com/2021/08/18/apple-amazon-exxon-and-the-toughest-carbon-emissions-to-capture.html#:~:text=Scope%203%20carbon%20emissions%2C%20or,as%2085%25%20to%2095%25.

gas industry are more than six times the level of its Scope 1 and 2 emissions.[882] Companies may have indirect control over their Scope 3 emissions through choices they make, for example in selecting suppliers, designing products, or sourcing inputs more efficiently. Nevertheless, the majority of companies do not typically report this information. As of July 10, 2020, for example, within the sample of companies belonging to the MSCI ACWI Investable Market Index (IMI),[883] the total Scope 3 average intensity was almost three times greater than the combined Scope 1 and 2 intensity. Yet, only 18% of constituents of the MSCI ACWI IMI reported Scope 3 emissions, with even lower reporting percentages when looking at the individual Scope 3 categories.[884]

The reporting of Scope 3 emissions for these registrants would provide additional benefits for investors. Scope 3 emissions information may be material in a number of situations to help investors gain a more complete picture of the transition risks to which a registrant may be exposed. Relative to registrants with substantial Scope 1 and 2 emissions, future regulations that restrict emissions may impact registrants with high Scope 3 emissions differently. In certain industries, a transition to lower-emission products or processes may already be underway, triggered by existing policies, a shift in consumer preferences, technological changes, or other market forces.

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882 *See also* MSCI, *Emissions: Seeing the Full Picture* (Sept. 17, 2020), *available at* https://www.msci.com/www/blog-posts/scope-3-carbon-emissions-seeing/02092372761

883 The MSCI ACWI Investable Market Index (IMI) captures large, mid and small cap representation across 23 Developed Markets and 25 Emerging Markets countries, covering approximately 99% of the global equity investment opportunity set.

884 *Ibid*.

Registrants with significant Scope 3 emissions may be more likely to face disruptions not only in their cash flows, but also in their business models or value chains to the extent that these registrants are compelled to make changes in their products, suppliers, distributors, or other commercial partners.[885] Moreover, if consumer demand changes to favor less carbon intensive products, companies with high Scope 3 emissions may see a marked reduction in demand for their products, and companies that are not aware of these risks could be less profitable relative to those that understand these risks and are prepared to mitigate them. Alternatively, companies that can source inputs that involve less GHG emissions could achieve potential cost savings and those that could produce products that generate less GHG emissions by the end user could potentially enjoy higher demand. Some registrants may plan to shift their activities to capitalize on these changes and thus may need to allocate capital to invest in lower emissions equipment or to create new types of products. Investors would need information about the registrants' full GHG emissions footprint and intensity to determine and compare how exposed a registrant is to the financial risks associated with a transition to lower-carbon economy.

Over the last few years, a number of studies have shown that firms try to reduce their local carbon footprints by outsourcing their carbon emissions to suppliers in states or countries

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[885] Scope 3 upstream and downstream emissions represents a substantial portion of global GHG emissions. For example, according to a recent report, Scope 3 downstream emissions that happen after a product or service leaves a company's control/ownership represented about 49 % of global GHG emissions in 2019. Capital goods (87%), banks (81%) and retailing (80%) were among the industries with the highest percentage of Scope 3 downstream emissions relative to their total emissions. These downstream emissions can come from a variety of sources. For example, capital goods activities include emissions from raw material manufacturing and transport. Banks emit few GHGs to run their operations, — but finance the emissions of other companies through loans and investments. *See* State of Green Business 2021, *available at* https://www.spglobal.com/marketintelligence/en/news-insights/research/state-of-green-business-2021.

with weaker environmental policies.[886] These studies provide evidence of the substitutional relationship between direct and outsourced GHG emissions. Recent studies have also analyzed the substitution effects between Scope 1 and Scope 3 GHG emission activities of U.S. firms. The findings show that the relative share of Scope 1 emissions out of a firm's total emissions tend to fall at the expense of the rising proportion of its supplier-generated Scope 3 emissions and that a firm's imports further augment the substitutional relationship between its Scope 1 and Scope 3 emissions.[887] In addition to the outsourcing incentives related to regulatory arbitrage, the authors of these studies posit that firms may also be outsourcing emissions abroad to exploit investors' current difficulties in assessing the firm's carbon emissions through imports along the upstream supply chain. By requiring the disclosure of Scope 3 GHG emissions, the proposed rules would make it more difficult for non-SRC registrants to avoid investors' scrutiny by outsourcing all or part of their activities abroad.

Finally, as described in Section IV.A5.d, many companies have set emissions targets, and it is not always clear whether these targets pertain to Scope 3 emissions or not. As explained in Section IV.C.1.g, registrants would be required to disclose whether the targets pertain to Scope 3 emissions, and as described above, if they do, they would need to report such emissions. Without reporting of Scope 3 emissions amounts and categories, investors would not have the information they need to understand the scale and scope of actions the company may need to

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886 *See, e.g.* I Ben-David, Y. Jang, S. Kleimeier, and M. Viehs, *Exporting Pollution: Where Do Multinational Firms Emit CO2?* 36 (107) ECONOMIC POLICY 377–437 (2021); X. Li and Y.M. Zhou, *Offshoring Pollution While Offshoring Production?* 38 STRATEGIC MANAGEMENT JOURNAL 2310–2329 (2017).

887 *See* R. Dai, R. Duan, H. Liang, and L. Ng, *Outsourcing Climate Change* (SSRN Working Paper)(2021), *available here* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3765485.

take to fulfill its commitment, and thus the overall financial implications of a registrant's targets. For example, a registrant's disclosure of its Scope 3 emissions, together with the proposed financial statement metrics, could allow investors to assess the potential (additional) investments the registrant may need to make to meet a certain goal. Moreover, as described further below, reporting of Scope 3 emissions gives a quantitative metric for investors to track, thus reducing opportunities for misleading claims on the part of the registrant.

Because the value of a firm's equity is largely derived from expected future cash flows, disclosure of Scope 1, 2, and 3 emissions can help investors incorporate risks associated with such future cash flows into asset values today. Indeed, the academic literature indicates that equity is a long-term asset, meaning that even risks related to regulatory changes in the distant future could be priced today.[888] Thus, for many registrants, reasonable investors may view GHG emissions as necessary to assess the registrants' exposure to climate-related risks, particularly transition risks, and whether they have developed strategies to reduce their carbon footprint in the face of potential regulatory, policy, and market constraints. This may be particularly important in light of the investor demand documented in IV.B.1 and the potential price impact, as discussed in IV.D.

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[888] *See* J. van Binsbergen, *Duration-Based Stock Valuation: Reassessing Stock Market Performance and Volatility* (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3611428; D. Greenwald, M. Leombroni, H. Lustig, and S. van Nieuwerburgh, *Financial and Total Wealth Inequality with Declining Interest Rates* (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3789220. Both of these papers find that the Macauley duration of equity, the weighted average length of time which investors will receive the cash flows from the asset, is in excess of 35 years as of 2019. This indicates that changes in cash flows in the distant future can impact equity prices today.

f. Assurance of GHG Scopes 1 and 2 emissions disclosures for large accelerated filers and accelerated filers

The proposed rules would require registrants that are large accelerated filers and accelerated filers to provide an attestation report for the registrant's Scope 1 and 2 GHG emissions disclosures. Large accelerated filers constitute approximately 31% of the universe of registrants that filed annual reports during calendar year 2020 (1,950 out of 6,220), but account for 93.6% of market cap within the same universe. Accelerated filers constitute approximately 10% of the universe of registrants that filed annual reports during calendar year 2020 (645 out of 6,220) and account for 0.9% of market cap within the same universe.

The proposed rules provide specific transition periods for obtaining attestation reports. Large accelerated filers would be required to provide Scopes 1 and 2 emissions disclosures in the fiscal year immediately following rule adoption. Next, they would be required to obtain limited assurance over these disclosures in fiscal years 2 and 3 after adoption. They would then be required to obtain reasonable assurance over these disclosures in fiscal year 4 after adoption and going forward. Accelerated filers would follow the same timeline but with a delay of one fiscal year. Specifically, accelerated filers would be required to provide Scopes 1 and 2 emissions disclosures in fiscal year 2 after adoption. Next, they would be required to obtain limited assurance over these disclosures fiscal years 3 and 4 after adoption. They would then be required to obtain reasonable assurance over these disclosures in fiscal year 5 after adoption and going forward.

The proposed transition periods for assurance over large accelerated filers' and accelerated filers' Scopes 1 and 2 GHG emission disclosures are intended to provide these registrants time to familiarize themselves with the GHG emissions disclosure requirements, develop the relevant DCP, and provide the market with an opportunity to develop enough expertise to satisfy the increased demand for GHG emission assurance services. We expect that during the proposed transition periods, the market for assurance services would further mature with respect to institutional knowledge, procedural efficiency, and overall competition, thus lowering costs for registrants and improving the quality of service. Although Scope 3 GHG emissions can constitute a large portion of a registrant's total emission, the proposed rules would exclude Scope 3 GHG emission disclosures from the attestation requirement due to the unique challenges associated with their measurement, which is based on data sources not owned by the registrant,[889] as well as the potential higher costs associated with their verification.

Section IV.A.5.e above discusses survey evidence on the frequency with which firms obtain assurance in sustainability reports. This evidence suggests that a significant fraction of large companies already obtain some form, albeit limited, of assurance. Practices appear to be fragmented with respect to the levels of assurance provided, the assurance standards used, the types of service providers, and the scope of disclosures covered by the assurance. One consequence of such fragmentation has been a lack of clarity about the nature of assurance provided, which can lead to confusion for investors when assessing the quality of disclosures. Moreover, as noted above, the voluntary nature of the reporting could result in biased or incomplete data. The fact, however, that a significant proportion of large companies already

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[889] See Section II.G.3.

obtain some form of assurance over this information is indicative of investors' and companies' need for such disclosures to be reliable.

The importance of assurance for climate-related information also is highlighted by the International Federation of Accountants, which recently published its Vision for High-Quality Sustainability Assurance.[890] As discussed earlier, contrary to other quantitative information that is provided outside of the financial statements, and which is typically derived from the same books and records that are used to generate a registrant's audited financial statements, GHG emissions disclosures are not developed from information that is included in the registrant's books and records.[891] Accordingly, such quantitative disclosure is not be subject to audit procedures as part of the audit of the financial statements in the same filing. Because of this, the proposed requirement of a third-party attestation report may be particularly beneficial to verify the reliability of such quantitative information and enhance its accuracy.. In general, subjecting climate-related disclosures to assurance would require the assurance provider to assess the risk of material misstatements related to the estimates and judgments, including through evaluation of the method of measurement and reasonableness of the assumptions used, and an understanding of management's risk management processes, including the risks identified and the actions taken to address those risks.[892] Moreover, by specifying minimum standards for the assurance provided with respect to GHG Scope 1 and 2 emissions disclosures, we expect the proposed rules

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[890] *See* IFAC Charts the Way Forward for Assurance of Sustainability Information (Dec. 6, 2021), *available at* https://www.ifac.org/news-events/2021-12/ifac-charts-way-forward-assurance-sustainability-information.

[891] *See* Section II.H.1 for more information.

[892] *See* PCAOB, AS 2110 Identifying and Assessing Risks of Material Misstatement (2010).

to promote accuracy and consistency in the reporting of this information, while also providing investors with a baseline level of reliability against which to evaluate the disclosures.[893]

Academic research finds that assurance procedures can increase the relevance and reliability of disclosures,[894] particularly for those involving significant estimation uncertainties. While most of this academic evidence focuses on the effects of reasonable assurance procedures, we cannot preclude the possibility that such findings may have implications for limited assurance as well. Experimental evidence has found that both limited and reasonable assurance can increase perceived reliability of sustainability reports, but those same studies do not find a statistically significant difference between limited and reasonable assurance.[895] Obtaining assurance for sustainability reports, which as noted above is typically limited assurance, has also been associated with firms with lower costs of capital, increased analyst coverage, and decreased analyst forecast errors and forecast dispersion.[896]

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893 *See* K. Hodge, K., N. Subramaniam, J. Stewart, *Assurance of Sustainability Reports: Impact on Report Users' Confidence and Perceptions of Information Credibility*, (19) *Australian Accounting Review* 178-194 (2009), *available at* https://doi.org/10.1111/j.1835-2561.2009.00056.x

894 *See* supra note 873.

895 *See, e.g.,* K. Hodge, K., N. Subramaniam, and J. Stewart, *Assurance of Sustainability Reports: Impact on Report Users' Confidence and Perceptions of Information Credibility*, 19 AUSTRALIAN ACCOUNTING REVIEW 178-194 (2009), *available at* https://doi.org/10.1111/j.1835-2561.2009.00056.x; Mark Sheldon, *User Perceptions of CSR Disclosure Credibility with Reasonable, Limited and Hybrid Assurances* (Dissertation) (2016) *available at* https://vtechworks.lib.vt.edu/bitstream/handle/10919/65158/Sheldon_MD_D_2016.pdf. This absence of evidence, however, is not necessarily evidence of absence. It is possible that reasonable assurance can have benefits over limited assurance that are not easily identifiable.

896 *See* R.J. Casey and J.H. Grenier, Understanding and contributing to the enigma of corporate social responsibility (CSR) assurance in the United States, 34(1) AUDITING: A JOURNAL OF PRACTICE & THEORY 97, 97-130 (2015). The authors also find that the lower costs of capital are in excess of estimated assurance costs (*i.e.*, 5% to 10% of total audit fees) for the majority of companies. We acknowledge, however, that the benefits cited in this study may be overstated to the extent that they reflect a selection bias. Specifically, companies that anticipate a net loss due to assurance would choose to forgo obtaining such assurance, thereby removing themselves from the treatment group. This potential limitation in interpreting such findings is also supported by evidence of systematic differences in companies voluntarily reporting higher assurance levels. *See* C. H. Cho, G. Michelon, D. M. Patten, and R. W. Roberts, *CSR report assurance in the USA: an empirical investigation of determinants and effects*, 5(2) SUSTAINABILITY ACCOUNTING, MANAGEMENT AND POLICY JOURNAL 130, 130-148 (2014), *available at* https://doi.org/10.1108/SAMPJ-01-2014-0003.

The proposed rules would require the attestation report to identify the criteria against which the subject matter was measured or evaluated, the level of assurance provided, the nature of the engagement, and the attestation standard used. In particular, the proposed rules would require the attestation report to include a description of the work performed as a basis for the attestation provider's conclusion and for that conclusion to be provided pursuant to standards that are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment. We expect this provision would help ensure that the standards upon which the attestation report is based were the result of a transparent and reasoned process. In this way, the requirement should help to protect investors who may rely on the attestation report by limiting the standards used to those that are appropriate for the subject matter and purpose. Further, we expect this provision to enhance the transparency of the GHG emissions attestation report for investors by providing them with additional information about the general procedures undertaken by the attestation provider. For example, under the proposed rules, an attestation report providing limited assurance would need to state that the procedures performed vary in nature and timing from, and are less extensive than, a reasonable assurance engagement, thus helping investors understand the level of assurance provided.

The GHG emissions attestation report would also be required to include a statement that describes any significant limitations associated with the measurement or evaluation of the subject matter against the criteria. The provision would require disclosure about the estimation uncertainties inherent in the quantification of GHG emissions, driven by reasons such as the state of the science and assumptions used in the measurement and reporting processes. By eliciting disclosure with respect to the procedures undertaken by the attestation provider, such as inquiries and analytical procedures, and the methodology used in the attestation process, the proposed provision would enhance the transparency of the GHG emissions attestation quality, thus allowing investors to gain a better understanding of the emission related information. This could help investors process emission related information more effectively. More informed investment decisions by investors also may benefit registrants by lowering their cost of capital.

The proposed rules would also require registrants to disclose whether the attestation provider has a license from any licensing or accreditation body to provide assurance and whether the GHG emissions attestation engagement is subject to any oversight inspection program and record-keeping requirements with respect to the work performed for the GHG emissions attestation. These requirements are expected to benefit investors by helping them to better understand the qualifications of the GHG emissions attestation provider, which in turn would allow them to make better informed decisions about the reliability of such information.

Finally, the proposed rules would require that the GHG emissions attestation report be prepared and signed by a provider that is an expert in GHG emissions and independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report. These qualification and independence requirements should help ensure that the attestation provider is capable of exercising informed, objective and impartial judgment. Academic research has found that the independence of assurance providers can be important in certain settings for disclosure quality.[897] Academic research has also found that equity prices respond to analyst

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[897] *See* N. Tepalagul, and L. Lin, Auditor Independence And Audit Quality: A Literature Review, 30(1) JOURNAL OF ACCOUNTING, AUDITING & FINANCE 101-121 (2015) (for a more detailed discussion on academic evidence on independence in auditing).

forecast even after management has released the exact same information, highlighting more generally the perceived value of external evaluations of firm disclosures and resulting investor confidence in the related disclosures.[898]

g. Targets and Goals Disclosure

The proposed rules would require a registrant to disclose whether it has set any climate-related targets or goals and, if so, how it intends to meet those targets and goals. Such climate-related targets or goals might relate to the reduction of GHG emissions or address energy usage, water usage, conservation or ecosystem restoration. Associated disclosure would include the scope of activities and emissions included in the target, the unit of measurement, and the defined time horizon. Additionally, disclosures include the baseline emissions for measuring progress, any interim targets, how it intends to meet these targets or goals, and data showing any progress toward achieving these targets, including how that progress was achieved, and details about any carbon offsets of RECs that have been used.

For example, in 2019 Amazon and Global Optimism co-founded The Climate Pledge, a commitment to net zero carbon by 2040. Since then, a growing list of major companies and organizations have signed on to the Climate Pledge, which indicates a commitment to the following three principles: (i) Measure and report greenhouse gas emissions on a regular basis; (ii) Implement decarbonization strategies in line with the Paris Agreement; (iii) Neutralize any remaining emissions with additional offsets to achieve net zero annual carbon emissions by 2040.[899] The proposed rules would help to make such commitments more transparent by

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[898] *See* Marco Grotteria, and Roberto Gomez Cram, *Do Financial Investors Underreact To Voluntary Corporate Disclosure?* (Working Paper) (2022).

[899] As of Jan. 25, 2022, The Climate Pledge has acquired 217 signatories. *See The Climate Pledge*, *available at* https://www.theclimatepledge.com/us/en/Signatories.

requiring disclosure on the unit of measurement, time horizon, and baseline for measuring progress, including how that progress was achieved (e.g. through efficiency improvements, renewable energy adoption, materials reductions, and other carbon emission elimination strategies).

Such standardized reporting as a form of an oversight or monitoring mechanism might be critical in overcoming agency problems in the presence of asymmetric information. Investment in achieving targets could be value-enhancing in the long-run, but reduce cash flow in the short-run. Companies may decide that it is an optimal strategy to bear the costs up front of shifting its operations to those that have fewer emissions or upgrading their equipment, rather than bearing the risk that these costs will be borne in an unpredictable and possibly disorderly way in the future. In the absence of a means to credibly convey that efforts to achieve these long-term targets are being undertaken diligently, however, investors might be unable to observe which registrants are actually following through on such actions. For example, if registrants are incurring costs in the short-run to undertake investments to reduce Scope 1, 2, and 3 emissions, reducing short-run profitability, but are unable to convey to investors that they are meaningfully following through on achieving potential long-term value-enhancing strategies, there could be a disincentive for investors to invest in the firm, thus undermining its value in the long-run. This has been put forth as one potential explanation for some private sector attempts at addressing these problems, such as green bonds, which commit firms to recurring, more standardized disclosure requirements for progress in achieving stated targets and goals.[900] The proposed rules would provide enhanced transparency about targets and goals so that investors can identify

[900] *See* S. Lu, *The Green Bonding Hypothesis: How do Green Bonds Enhance the Credibility of Environmental Commitments?* (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3898909.

registrants with credible goals and track their progress over time. This can not only reduce incentives for misleading goal disclosures, but can also allow investors to recognize goals that generate long-term value despite short run costs, which can attract capital and increase firm value.

As explained above, the pursuit of targets could have a material impact, either in the short-term or long-term, on a registrant's operations or financial condition.[901] At this time, however, there is little consistency with respect to the extent of disclosure and the relevant details concerning such climate-related targets and goals. This can result in insufficient information for investors' monitoring or decision-making needs. The proposed disclosure could provide more comparable, consistent, and reliable metrics of any climate-related targets or goals. It would require a registrant to clearly define baselines for targets, the scope of activities and emissions covered by the target, the unit of measurement, the defined time horizon, and how progress is made towards the targets. For example, the disclosure would require the registrant to state whether or not the targets pertain to Scope 3 emissions. If targets do include Scope 3 emissions, disclosure of Scope 3 emission sources and amounts would be required so that investors would understand the scale and scope of changes the company would need to undertake, and thus the full financial impact of meeting the target.[902] Such disclosures would also enable investors to monitor progress firm management has made and plans to make towards achieving climate-related targets or goals, assess the credibility of its goal, and evaluate the effectiveness of the company's investments to achieve its goals. As described above, this

901 *See* supra Sections II.G.1.b. and III C.1.e.

902 *See id.*

required disclosure could make targets more credible and serves as an oversight or monitoring mechanism.

h. Structured Data Requirement

Under the proposed rules, the new climate-related disclosures would be tagged in the Inline XBRL structured data language. The provision requiring Inline XBRL tagging of climate-related disclosures would benefit investors by making those disclosures more readily available for aggregation, comparison, filtering, and other enhanced analytical methods.[903] These benefits are expected to reduce search costs and substantially improve investors' information-processing efficiency.[904] XBRL requirements for public company financial statement disclosures have been observed to reduce information-processing costs, thereby decreasing information asymmetry and increasing transparency by incorporating more company-specific information into the financial markets.[905] In addition, the proposed Inline XBRL requirement for the climate-related

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903 For example, structuring climate-related disclosures would enable more advanced analyses than those described in the aforementioned Commission staff review that used keyword searches and NLP. *See supra* IV.A.5.a.

904 The findings on XBRL cited in the following paragraphs are not necessarily focused on climate-related disclosures and metrics, but we expect the findings to be generally applicable and to result in similar benefits for investors.

905 *See, e.g.*, Y. Cong, J. Hao, and L. Zou, *The Impact of XBRL Reporting on Market Efficiency*, 28 J. INFO. SYS. 181 (2014) (finding support for the hypothesis that "XBRL reporting facilitates the generation and infusion of idiosyncratic information into the market and thus improves market efficiency"); Y. Huang, J.T. Parwada, Y.G. Shan, and, J. Yang, *Insider Profitability and Public Information: Evidence From the XBRL Mandate* (Working Paper) (2019) (finding XBRL adoption levels the informational playing field between insiders and non-insiders); J. Efendi, J.D. Park, and C. Subramaniam, *Does the XBRL Reporting Format Provide Incremental Information Value? A Study Using XBRL Disclosures During the Voluntary Filing Program*, 52 ABACUS 259 (2016) (finding XBRL filings have larger relative informational value than HTML filings); J. Birt, K. Muthusamy, and P. Bir, XBRL and the Qualitative Characteristics of Useful Financial Information, 30 ACCOUNT. RES. J. 107 (2017) (finding "financial information presented with XBRL tagging is significantly more relevant, understandable and comparable to non-professional investors"); S.F. Cahan, S. Chang,W.Z. Siqueira, and K. Tam, *The Roles of XBRL and Processed XBRL in 10-K Readability*, J. BUS. FIN. ACCOUNT. (2021) (finding Form 10-K file size reduces readability before XBRL's adoption since 2012, but increases

disclosures may further limit agency problems, as XBRL requirements for financial statement tagging have been observed to facilitate external monitoring of firms through the aforementioned reduction of information processing costs.[906]

Investors with access to XBRL analysis software may directly benefit from the availability of the climate-related disclosures in Inline XBRL, whereas other investors may indirectly benefit from the processing of Inline XBRL disclosures by asset managers and by information intermediaries such as financial analysts.[907] In that regard, XBRL requirements for public company financial statement disclosures have been observed to increase the number of companies followed by analysts, decrease analyst forecast dispersion, and, in some cases,

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readability after XBRL adoption, indicating "more XBRL data improves users' understanding of the financial statements").

906 *See, e.g.,* P.A. Griffin, H.A. Hong, J.B. Kim, and J.H. Lim, *The SEC's XBRL Mandate and Credit Risk: Evidence on a Link between Credit Default Swap Pricing and XBRL Disclosure*, 2014 AMERICAN ACCOUNTING ASSOCIATION ANNUAL MEETING (2014) (attributing the negative association between XBRL information and credit default swap spreads to "(i) a reduction in firm default risk from better outside monitoring and (ii) an increase in the quality of information about firm default risk from lower information cost"); J.Z. Chen, H.A. Hong, J.B. Kim, and J.W. Ryou, Information Processing Costs and Corporate Tax Avoidance: Evidence from the SEC's XBRL Mandate, 40 (2) *J. ACCOUNT PUB. POL*. (2021) (finding XBRL reporting decreases likelihood of firm tax avoidance, because "XBRL reporting reduces the cost of IRS monitoring in terms of information processing, which dampens managerial incentives to engage in tax avoidance behavior").

907 Additional information intermediaries that have used XBRL disclosures may include financial media, data aggregators and academic researchers. *See, e.g.*, N. Trentmann, *Companies Adjust Earnings for Covid-19 Costs, but Are They Still a One-Time Expense?* THE WALL STREET JOURNAL (2020), *available at* https://www.wsj.com/articles/companies-adjust-earnings-for-covid-19-costs-but-are-they-still-a-one-time-expense-11600939813 (citing XBRL research software provider Calcbench as data source); *Bloomberg Lists BSE XBRL Data*, XBRL.org (2018), *available at* https://www.xbrl.org/news/bloomberg-lists-bse-xbrl-data/ ; R. Hoitash, and U. Hoitash, *Measuring Accounting Reporting Complexity with XBRL*, 93 ACCOUNT. REV. 259–287 (2018). *See 2019 Pension Review First Take: Flat to Down*, GOLDMAN SACHS ASSET MANAGEMENT (2020) (an example of asset manager use of XBRL data), *available at* https://www.gsam.com/content/dam/gsam/pdfs/common/en/public/articles/2020/2019_Pension_First_Take.pdf?sa=n&rd=n (citing XBRL research software provider Idaciti as a data source).

improve analyst forecast accuracy.[908] Should similar impacts on the analysts' informational environment arise from climate-related disclosure tagging requirements, this would likely benefit retail investors, who have generally been observed to rely on analysts' interpretation of financial disclosures rather than directly analyzing those disclosures themselves.[909]

2. Costs

Below we discuss the anticipated direct and indirect costs of the proposed rules. Direct costs would include compliance burdens for registrants in their efforts to meet the new disclosure requirements. These direct costs could potentially be significant, however the incremental costs would be lower to the extent that registrants already provide the required disclosures. Indirect costs may include heightened litigation risk and the potential disclosure of proprietary information.[910] We proceed by discussing these various costs.

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[908] *See, e.g.*, A.J. Felo, J.W. Kim, and J. Lim, Can XBRL *Detailed Tagging of Footnotes Improve Financial Analysts' Information Environment?*, 28 INT'L J. ACCOUNT. INFO. SYS. 45 (2018); Y. Huang, Y.G. Shan, and J.W. Yang., *Information Processing Costs and Stock Price Informativeness: Evidence from the XBRL Mandate*, 46 AUST. J. MGMT., 110–131 (2020) (finding "a significant increase of analyst forecast accuracy post-XBRL"*)*; M. Kirk, J. Vincent, and D. Williams, *From Print to Practice: XBRL Extension Use and Analyst Forecast Properties* (Working Paper 2016) (finding "the general trend in forecast accuracy post-XBRL adoption is positive"); C. Liu, T. Wang, and L.J. Yao, *XBRL's Impact on Analyst Forecast Behavior: An Empirical Study*, 33 J. ACCOUNT. PUB. POL. 69–82 (2014) (finding "mandatory XBRL adoption has led to a significant improvement in both the quantity and quality of information, as measured by analyst following and forecast accuracy"). *But see* S.L. Lambert, K. Krieger, and N. Mauck, *Analysts' Forecasts Timeliness and Accuracy Post-XBRL*, 27 INT'L. J. ACCOUNT. INFO. MGMT. 151-188 (2019) (finding significant increases in frequency and speed of analyst forecast announcements, but no significant increase in analyst forecast accuracy post-XBRL).

[909] *See, e.g.*, *A.* Lawrence, J. Ryans, and E. Sun, *Investor Demand for Sell-Side Research*, 92 ACCOUNT. REV. 123–149 (2017) (finding the "average retail investor appears to rely on analysts to interpret financial reporting information rather than read the actual filing"); D. Bradley, J. Clarke, S. Lee, and C. Ornthanalai, *Are Analysts' Recommendations Informative? Intraday Evidence on the Impact of Time Stamp Delays*, 69 J. FINANCE 645–673 (2014) (concluding "analyst recommendation revisions are the most important and influential information disclosure channel examined").

[910] For example, these costs may include the revelation of trade secrets, the disclosure of profitable customers and markets, or the exposure of operating weakness to competing firms, unions, regulators, investors, customers or suppliers. These costs are commonly referred to as "proprietary costs."

a. Direct costs

The primary direct costs that the proposed rules would impose on registrants are compliance costs. To the extent that they are not already gathering the information required to be disclosed under the proposed rules, registrants may need to re-allocate in-house personnel, hire additional staff, and/or secure third-party consultancy services. Registrants may also need to conduct climate-related risk assessments, collect information or data, measure emissions (or, with respect to Scope 3 emissions, gather data from relevant upstream and downstream entities), integrate new software or reporting systems, seek legal counsel, and obtain assurance on applicable disclosures (i.e., Scopes 1 and 2 emissions). In addition, even if a registrant already gathers and reports the required information, some or all of this information may be in locations outside of SEC filings (such as sustainability reports posted on company websites or emissions data reported to the EPA). These registrants may face lower incremental costs by virtue of already having the necessary processes and systems in place to generate such disclosures; however they may still incur some additional costs associated with preparing this information for inclusion in SEC filings.

(1) General cost estimates

In this section, we review sources that provide insight into the magnitude of the potential costs associated with the proposed rules. With some exceptions discussed in further detail, these sources provide information at the level of general costs for climate disclosures. We acknowledge that these sources are limited in scope or representativeness and thus may not directly reflect registrants' compliance costs. For instance, some third-party sources may present cost estimates that do not include all items required under the proposed rules (e.g., assurance costs), or else they may aggregate the costs of multiple items (including those not required under the proposed rules) into a single cost figure. However, these sources may serve as useful references to the extent that they overlap with specific disclosure elements required in the proposed rules. For example, third-party cost estimates of preparing TCFD reports or completing the CDP questionnaire can offer a rough approximation of potential compliance costs due to their similarity with the proposed rules. Below, we request further data to assist us in estimating potential costs.

As discussed in Section V, for purposes of the Paperwork Reduction Act of 1995 ("PRA"),[911] we estimate the annual costs over the first six years of compliance with the proposed rules.[912] For non-SRC registrants, the costs in the first year of compliance are estimated to be $640,000 ($180,000 for internal costs and $460,000 for outside professional costs), while annual costs in subsequent years are estimated to be $530,000 ($150,000 for internal costs and $380,000 for outside professional costs). For SRC registrants, the costs in the first year of compliance are estimated to be $490,000 ($140,000 for internal costs and $350,000 for outside professional costs), while annual costs in subsequent years are estimated to be $420,000 ($120,000 for internal costs and $300,000 for outside professional costs). These costs are expected to decrease over time for various reasons, including increased institutional knowledge, operational efficiency, and competition within the market for relevant services.

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[911] See Paperwork Reduction Act, Pub. L. No. 104-13, 109 Stat 163 (1995) (codified at 44 U.S.C. 3501 *et seq.*). *See infra* Section V.

[912] The following estimates are applicable to registrants filing form 10-K that have no existing climate-related disclosure processes or expertise. All estimates are rounded to the nearest $5,000.

One commenter provided cost estimates for their services in assisting client companies prepare TCFD-aligned disclosures.[913] For companies that have no prior experience in GHG analysis or climate-related disclosures, the commenter estimates initial costs to range from $150,000 to $200,000 to prepare TCFD-aligned disclosures.[914] Companies that have already calculated their carbon footprints and only need assistance with TCFD reporting may expect costs of $50,000 to $200,000, with the average cost of approximately $100,000. Ongoing costs for their services are expected to be zero conditional upon the TCFD requirements remaining unchanged,[915] however the reporting company may still incur internal costs in preparing these disclosures on an annual basis.

Another source presents survey results of climate-related disclosure costs for three unnamed companies, which consist of a European-based multinational large-cap financial institution, a US-based large-cap industrial manufacturing company, and a US-based mid-cap waste management company.[916] The survey reports that each firm has "already established

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913 *See* memorandum, dated Feb. 4, 2022, concerning staff meeting with representatives of S&P Global.

914 This cost range pertains to clients' use of the commenter's "TCFD Suite", which consists of the following modules: benchmarking / gap assessment, management interviews, physical risk assessment, and various transition risk assessments, including policy risk analysis, market risk assessment, technology risk assessment, and reputation risk assessment. This cost range excludes the cost of additional services, such as target-setting ($20,000 to $30,000) and calculating GHG footprints ($75,000 to $125,000 for Scopes 1, 2, and 3), the latter of which is discussed in further detail in the following subsection.

915 The commenter reports that should the TCFD requirements change based on new science, projections, and business changes, costs of the TCFD Suite in future years may range from $125,000 to $175,000.

916 *See* L. Reiners and K. Torrent, *The Cost of Climate Disclosure: Three Case Studies on the Cost of Voluntary Climate-Related Disclosure*, Climate Risk Disclosure Lab (2021), *available at* https://climatedisclosurelab.duke.edu/wp-content/uploads/2021/12/The-Cost-of-Climate-Disclosure.pdf.

robust in-house climate disclosure systems that can easily be leveraged to comply with any new disclosure rule," as evidenced by their concurrent reporting under multiple climate disclosure frameworks (e.g., TCFD, CDP, SASB, GRI, etc.). The respondents indicate that anticipated incremental costs of a mandatory climate disclosure rule are therefore expected to be minimal.[917] All respondents disclose Scopes 1, 2, and 3 emissions, while none of them obtain third-party assurance for their climate-related disclosures.

The mid-cap waste management company estimates that the cost of producing their first TCFD report was less than \$10,000. The company's reported annual costs consist of employee costs (\$12,600)[918] and third-party costs (\$60,000 to \$160,000).[919] However, the reported annual costs may be less applicable to potential compliance costs as they combine additional costs associated with several other activities not necessarily required in the proposed rules, including its adherence to multiple climate disclosure frameworks (e.g. TCFD, GRI, SASB, and CDP) and designing its annual sustainability report and associated webpage.[920] Overall, the company

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917 Incremental costs would be minimal to the extent that the mandatory disclosure rule overlaps with their current reporting practices. The respondents acknowledge that actual incremental costs would depend on the contents of the final rule.

918 The company allocates three employees to produce climate-related disclosures. Two employees in Legal and Compliance devote a combined 80 hours per year on this task, while one employee in Management and Administration devotes two hours per year.

919 The company reports that approximately one-third of these third-party costs is associated with designing the annual sustainability report and associated webpage, while the remaining two-thirds is associated with report writing and consulting work on the voluntary frameworks.

920 These annual costs reflect a larger scope of climate-related disclosures (e.g. multiple frameworks, sustainability report, etc.) relative to the initial cost, which is specific to TCFD reporting only. Nevertheless, because these estimates aggregate the costs of reporting under the TCFD in addition to other climate disclosure framework, these estimates can serve as an upper bound of what annual costs may be specific to TCFD reporting only.

reports that its total costs related to producing climate-related disclosures across these multiple frameworks are less than 5% of its total SEC compliance-related costs.

The large-cap industrial manufacturing company reports that the costs of preparing its first CDP questionnaire was no more than $50,000. Additionally, the combined costs of producing its first TCFD, SASB, and GRI disclosures were between $200,000 and $350,000. Reported annual costs include internal costs (between $200,000 and $350,000)[921] and the cost for auditors and consultants ($400,000).[922] These cost estimates, however, may overestimate potential compliance costs to the extent that they include disclosure items or activities not required in the proposed rules. The company reports that their annual costs of producing its voluntary climate-related disclosures are less than 0.1% of their revenues.

The multinational financial institution reports that the cost of producing its first TCFD report, SASB report, and CDP questionnaire were each less than $100,000 given that such information overlaps with what the company already discloses under the EU's Prospectus Regulation (Regulation (EU) 2017/1129). The company estimates annual costs ranging from $250,000 and $500,000 to produce these disclosures, but as before, this range may combine the costs of activities that are not required in the proposed rules.[923] Similar to the industrial

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[921] Internal costs include the cost of approximately 20 employees working part-time on climate-related disclosures from Nov. until Mar. and one full-time consultant.

[922] Auditors review data quality and data collection procedures, while consultants help prepare substantive disclosures, advise on adherence to the voluntary climate disclosure frameworks, and prepare web updates.

[923] The company notes that the bulk of its annual costs comes from producing chapter 7 of its Universal Registration Document, issued under the EU's Prospectus Regulation (Regulation (EU) 2017/1129). Chapter 7 pertains to the extra-financial performance statement of the consolidated firm.

manufacturing company, this company also notes that the annual costs of producing its voluntary climate-related disclosures are less than 0.1% of their revenues.

Some commenters also provided estimates of climate-related disclosure costs for individual firms. One commenter provided a breakdown of such costs for seven unnamed large cap firms across six different industries.[924] Headcount requirements ranged from two to 20 full-time equivalent employees. One large-cap firm in the energy industry reported that its TCFD reporting process involved 40 employees and six months of nearly full-time participation by 20 core team members. Employee hours spent on climate reporting ranged from 7,500 to 10,000 annually. Fees for external advisory services ranged from $50,000 to $1.35 million annually, which generally included legal counsel and consulting services related to environmental engineering, emissions, climate science, modeling, or sustainability reporting. Another commenter, a Fortune 500 energy infrastructure firm, reported that it employs a full-time, management level director that spends about 25% of his time developing sustainability reports and other ESG initiatives. This commenter also reported that it pays a third-party consulting firm more than $250,000 annually to assist in its ESG and sustainability report process.[925]

The UK's Department for Business, Energy & Industrial Strategy, as part of its Green Finance Strategy, has released a final stage impact assessment (the "UK impact assessment") of their proposed rules that would also require certain TCFD-aligned disclosures from firms and

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[924] *See* Letter from Society for Corporate Governance (June 11, 2021).

[925] *See* Letter from Williams Companies, Inc. (June 12, 2021).

asset managers listed on UK financial markets.[926] The UK impact assessment provides a breakdown of estimated average compliance costs per affected entity. Under the assumption that affected entities have no pre-existing climate-related disclosure practices or expertise, the UK impact assessment estimates that first-year one-time costs would include familiarization costs ($17,300[927] plus $2,600 per subsidiary, as applicable) and legal review ($4,400). They also estimate recurring annual governance disclosure costs ($12,500), strategy disclosure costs ($17,900[928]), risk management disclosure costs ($14,900), metrics and targets disclosure costs ($104,400 in the first year and $80,500 in subsequent years[929]), internal audit costs ($30,300), and signposting costs ($100).[930] For companies with subsidiaries, the costs of collecting information from subsidiaries and processing this information are expected to be $4,300 for the

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926 *See* U.K. Dep't for Bus., Energy, & Indus. Strategy, *Mandating Climate-Related Financial Disclosures by Publicly Quoted Companies, Large Private Companies and Limited Liability Partnerships (LLPs)*, Final Stage Impact Assessment (Oct. 1, 2021), *available at* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1029317/climate-related-financial-disclosure-consultation-final-stage-impact-assessment.pdf (The UK's climate-related disclosure rules would apply to Relevant Public Interest Entities (PIEs), including Premium and Standard Listed Companies with over 500 employees, UK registered companies with securities admitted to AiM with more than 500 employees, Limited Liability Partnership (LLPs) within the threshold of the "500 test," and UK registered companies which are not included in the categories above and are within the threshold of the "500 test.").

927 In the final stage impact assessment, the cost estimate provided for familiarization costs assumes that scenario analysis is required. Because the proposed rules do not require scenario analysis, this number references familiarization costs provided in the *initial* impact assessment, which assumes no scenario analysis. *See* U.K. Dep't for Bus., Energy, & Indus. Strategy, *Mandating Climate-Related Financial Disclosures by Publicly Quoted Companies, Large Private Companies and Limited Liability Partnerships (LLPs)*, Consultation Impact Assessment (Jan. 29, 2021), *available at* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972423/impact-assessment.pdf.

928 This number excludes the cost of scenario analysis since this is not required under the proposed rules.

929 We note that these numbers do not include the costs of measuring and reporting Scope 3 emissions since this is not required under the UK proposed rules.

930 These numbers have been converted from GBP based on the 2021 average exchange rate of $1.3757 USD/GBP, rounded to the nearest $100. We note that the impact assessment also provides estimates of incremental costs associated with each subsidiary; however, these costs are not included in the estimates cited above for the sake of brevity. Signposting costs refer to the "additional annual cost to those in scope to upload the required reporting documentation and signposting to this documentation within their annual report."

parent company and $1,700 for each subsidiary. In total, the study estimates that a company with no pre-existing climate-related disclosure practices or expertise could incur costs of $201,800 in the first year and $177,900 in subsequent years, plus additional costs due to subsidiaries, as applicable. This cost estimation methodology is conditional upon assumptions regarding the number of required staff, the rank or title of the staff, and the required labor hours, which are then matched with local wage data to estimate final costs.

It is important to note that all of these cost estimates are conditional on specific assumptions and can vary significantly depending on firm characteristics, such as firm size, industry, business model, the complexity of the firm's corporate structure, starting level of internal expertise, etc. In addition, we note that, in certain cases, these cost estimates may represent a registrant's optimal response to investor demand, and thus may exceed the minimum cost necessary to fulfill mandatory reporting of climate-related risks. We are accordingly requesting comments regarding compliance costs, including cost data that can be used to generate more accurate, granular, and reliable cost estimates that are more representative of the full set of affected registrants.

(2) Cost estimates specific to emissions

In this section, we review the available evidence, which provides some insight into the scope of the compliance costs associated with reporting GHG emissions. We are cognizant of the type of costs that registrants will incur to report GHG emissions, e.g. resources, systems, design and implementation of DCP, external consulting services. In light of the limited information available, however, we are unable to fully and accurately quantify these costs. Accordingly, we are requesting comments regarding cost data for GHG emissions reporting.

One commenter reports that their services in calculating client companies' GHG footprints (Scopes 1, 2, and 3 emissions) would initially cost $75,000 to $125,000 if the client company has no prior experience in this area.[931] Ongoing costs amount to approximately $40,000 assuming no material changes in Scope 3 emissions (i.e., assess Scopes 1 and 2 only). If there are material changes to Scope 3 emissions, ongoing costs would range from $75,000 to $125,000 (i.e., assess Scopes 1, 2, and 3).

Another commenter, a climate management and accounting platform, provided cost estimates of the measurement and reporting of emissions. This commenter's estimates are disaggregated across scopes of emissions as well as "low maturity" vs "high maturity" companies with respect to emissions reporting. Low maturity companies are defined as those that have no formal understanding of GHG emission calculations and have no related policies or programs in place. Accordingly, these companies have not organized or collected any data for such a calculation. High maturity companies are defined as those that have the aforementioned understanding, policies, programs, and data. Therefore, high maturity companies are expected to face lower incremental costs. The commenter estimates that the average first-year startup cost of assessing Scopes 1 and 2 emissions amount to $45,000 and $25,000 for companies of low and high maturity, respectively. Including the assessment of Scope 3 emissions would increase the costs by $80,000 and $25,000 for companies of low and high maturity, respectively. The

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931 *See supra* note 783. Legal and audit fees are not included in these cost estimates.

commenter indicated that it expects these costs to decrease over time as software solutions simplify the process and reduce the burden on companies.

Additional cost estimates are provided by another commenter, which is an organization that assists companies, communities, and other organizations in accurately assessing emissions data across all scopes of emissions.[932] According to their pricing structure, initial one-time costs amount to $10,000, which includes identifying data input needs, developing the design and organization of user interfaces, establishing software and IT systems, and reporting emissions from prior years to the extent that historic data is available. Ongoing costs, which includes a subscription fee and data management fee, amount to $12,000 plus $1,200 per building that is covered in the calculation of emissions. Another organization that offers similar services, among others, indicates that their fees for GHG accounting for Scopes 1, 2, and 3 can range from $11,800 to $118,300.[933] Their fees for applying the PCAF method on investment and lending portfolios range from $11,800 to $35,500. They note that the assessment process take approximately 1-3 months depending on the complexity and availability of data.

The EPA has also sought to quantify the costs of measuring and reporting emissions in accordance with the mandatory Greenhouse Gas Reporting Program, which generally requires facility-level reporting of emissions from large emitters and from large suppliers of certain

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[932] *See* memorandum, dated Jan. 21, 2022, concerning staff meeting with representatives of Ledger8760, available at https://www.sec.gov/comments/s7-10-22/s71022.htm.

[933] *See* memorandum, dated Jan. 14, 2022, concerning staff meeting with representatives of South Pole. These numbers have been converted from EUR based on the 2021 average exchange rate of $1.183 USD/EUR, rounded to the nearest $100.

products (e.g., entities that produce gasoline that will eventually be consumed downstream by the end-user).[934] The EPA estimated that the rule would impose small expected costs on the facilities under its purview. The EPA estimated that, for most sectors, the costs represent at most 0.1% of sales.[935] For small entities,[936] the EPA estimated that the costs are on average less than 0.5% of sales. While the EPA's emissions reporting requirements, as discussed above, may elicit some of the information required under our proposed rules, given that the requirements are different, the actual compliance costs would differ accordingly.

A survey conducted by PCAF provides some estimates of the costs of assessing financed emissions.[937] Financed emissions, which can be one component of Scope 3 emissions for certain financial institutions, can be described as the emissions generated by companies in which a financial institution invests or to which it otherwise has exposure. The PCAF survey of 18 unnamed financial institutions[938] found that typical staff time ranged between 50 and 100 days and the costs for contracting external support was less than $20,000 for the majority of

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[934] *See* Section IV.A.3 for more information on the EPA mandatory Greenhouse Gas Reporting Program.

[935] *See* EPA, *Regulatory Impact Analysis for the Mandatory Reporting of Greenhouse Gas Emissions* (Sept. 2009), *available at* https://www.epa.gov/sites/default/files/2015-07/documents/regulatoryimpactanalysisghg.pdf. The EPA notes that several facility types do not currently report emissions (or the existence of such disclosure practices cannot be confirmed), therefore the cost estimates for these facility types reflect full start-up costs to meet the reporting requirements.

[936] The EPA defines a small entity as (1) a small business, as defined by SBA's regulations at 13 CFR Part 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district, or special district with a population of less than 50,000; or (3) a small organization that is any not-for-profit enterprise that is independently owned and operated and is not dominant in its field.

[937] *See* Letter from PCAF (Dec. 21, 2021).

[938] The 18 survey respondents consist of 2 insurance companies, 13 banks (commercial, investment, or development), 1 asset owner, and 2 asset managers. Respondents' asset size ranges from less than a $1bn USD to $500bn USD. The average assets covered by this disclosure activity was approximately $5-20bn USD.

respondents. These estimates may provide some sense of the costs that may be incurred by those financial institutions that would be required to report Scope 3 emissions under the proposed rules.

(3) Cost estimates of assurance for Scopes 1 and 2 emissions disclosures

Registrants that are accelerated filers and large accelerated filers will incur additional costs in obtaining assurance of Scopes 1 and 2 emissions disclosures. The Commission estimates these costs starting with data on these filers' median audit fees in fiscal year 2020, which is $989,566 and $2,781,962 for accelerated filers and large accelerated filers, respectively.[939] Next, an academic study suggests that assurance costs for sustainability reports (which serve as a common location for climate-related information, in addition to other non-financial topics) may range from 5% to 10% of total audit fees.[940] We take the minimum, median, and maximum percentages (5%, 7.5%, and 10%, respectively) and apply further adjustments based on (i) emissions disclosures typically compromising only a portion of CSR reports, (ii) the potential fee premium related to attestation report included in SEC filings, and (iii) the average pricing difference between limited and reasonable assurance. For limited assurance, we estimate that accelerated filers will incur costs ranging from $30,000 to $60,000 (with a median of $45,000), while large accelerated filers will incur costs ranging from $75,000 to $145,000 (with a median of $110,000). For reasonable assurance, we estimate that accelerated filers will incur costs

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[939] Data on audit fees is from Audit Analytics, which provides all fee data disclosed by SEC registrants in electronic filings since Jan. 1, 2000.

[940] *See* R.J. Casey and J.H. Grenier, *Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States*, 97 AUDITING: A JOURNAL OF PRACTICE & THEORY 130 (2015).

ranging from \$50,000 to \$100,000 (with a median of \$75,000), while large accelerated filers will incur costs ranging from \$115,000 to \$235,000 (with a median of \$175,000).

On the one hand, these estimates may underestimate actual costs as they are based on relative costs of assurance for financial statements, and assurance on emissions may differ in important ways. On the other hand, the costs may be lower in the future to the extent that the market for assurance services matures with respect to institutional knowledge, procedural efficiency, and overall competition. We request additional data that may assist in accurately assessing the costs of obtaining assurance over emissions disclosures.

(4) Factors that affect direct costs

Incremental compliance costs may be relatively lower for registrants that already meet some of the disclosure and tagging requirements. For instance, registrants that are currently subject to the EPA's Greenhouse Gas Reporting Program would face lower incremental costs in reporting certain scopes of emissions relative to a firm that has no emissions measurement systems in place.[941] Similarly, registrants that already provide extensive qualitative disclosures on climate-related risks, which tend to be large accelerated filers and registrants in high emission industries,[942] may face lower incremental costs in meeting certain disclosure requirements. As discussed in Section IV.A.5.a, the Commission's staff reviewed 6,644 recent annual reports (Forms 10-K, 40-F, and 20-F) and found that 33% of them contained disclosures related to

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[941] *See* Section IV.C.1.e for more information on how the proposed rules compare to the EPA's emissions reporting requirements.

[942] *See* Section IV.A.5.a

climate change, the majority of which discussed information related to business impact, emissions, international climate accords, and physical risks. Registrants with operations in foreign jurisdictions[943] where disclosure requirements are based on the TCFD's framework for climate-related financial reporting, would also face lower incremental costs.[944] Moreover, costs may also be mitigated by the proposed transition period, which would allow firms to more gradually transition to the new reporting regime.

Several industry reports also document how a sizeable portion of U.S. companies report climate-related information under one or more third-party frameworks that are either fully or partially aligned with the TCFD disclosure elements. For example, the CCMC survey (G&A study) reports that among their sample of U.S. public companies, 44% (53%) use the SASB, 31% (52%) use the GRI, 29% (30%) use the TCFD, and 24% (40%) use the CDP. Moody's analytics provides a detailed view for a sample of 659 U.S. companies of the existing disclosure rate across the different TCFD disclosure elements that range from a high of 45% disclosure rate for Risks and Opportunities - Strategy (a), to a low of 5% for Risks and Opportunities - Strategy (c) (see Table 4). Since the proposed rules are broadly consistent with the TCFD framework, we would expect lower incremental compliance costs for registrants that provide most or all disclosures according to the TCFD or related frameworks, including the CDP, which has fully integrated the TCFD disclosure elements into its disclosure questionnaire, and other frameworks and/or standards partly aligned with the TCFD recommendations.

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[943] E.g., Morningstar reports that over 35% of S&P 500 revenues came from foreign markets, while this percentage is around 20% for the revenues coming from companies belonging to the Russell 2000 index. See, https://www.morningstar.com/articles/918437/your-us-equity-fund-is-more-global-than-you-think.

[944] See Section IV.A.4 for a discussion on International Disclosure Requirements.

Similarly, registrants in the insurance industry may also face lower incremental costs due to their existing disclosure practices. As discussed in Section IV.A.3, a large subset of insurance firms are required to disclose their climate-related risk assessment and strategy via the NAIC Climate Risk Disclosure Survey. A comment by a state insurance commissioner stated that because this survey overlaps extensively with the TCFD recommendations, these firms should be able to easily switch to reporting via the TCFD disclosure framework.[945] This is because the proposed rules are broadly consistent with the TCFD. We expect that registrants in the insurance industry may be able to adapt more easily to providing disclosure under these rules.

Section IV.A.5.e reports survey evidence on the frequency with which firms obtain assurance in sustainability reports. This evidence suggests that a significant fraction of large companies already obtain some form, albeit limited, of assurance. To the extent that large accelerated filers and accelerated filers already voluntarily obtain some form of assurance over their GHG emissions, these registrants would face lower incremental costs associated with complying with the proposed rules' assurance requirements. These registrants tend to bear proportionately lower compliance costs than smaller issuers due to the fixed cost components of such compliance.[946] Additionally, as the market for assurance matures, the Commission staff expects these costs to decrease over time.

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945 *See* Letter from Mike Kreidler, Office of the Insurance Commissioner, State of Washington (June 14, 2021).

946 For example, during fiscal year 2020, median audit fees as percentage of revenue for large accelerated filers and accelerated filers was 0.16%, while the corresponding figure for non-accelerated filers was 1.1%.

Incremental costs may be higher for smaller firms considering that they are less likely to have climate-related disclosure systems and processes already in place.[947] If smaller firms were to face higher proportional fixed costs in meeting the disclosure requirements, this may potentially put them at a competitive disadvantage to larger firms.[948] Conversely, incremental costs for smaller firms may be lower to the extent that they have less complexity with respect to their assets and operations, which may allow them to assess climate-risk exposures or measure emissions at lower cost.

With respect to the Inline XBRL tagging requirements, various preparation solutions have been developed and used by operating companies to fulfill their structuring requirements, and some evidence suggests that, for smaller companies, XBRL compliance costs have decreased over time.[949] The incremental compliance costs associated with Inline XBRL tagging of climate-related disclosures would also be mitigated by the fact that filers that would be subject to the

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[947] *See supra* note 760. *See also* discussion of the Commission staff's review using climate-related keyword searches in Section IV.A.5.a.

[948] Because higher proportional fixed costs for smaller firms may be particularly acute with respect to assessing Scope 3 emissions, the proposed rules exempt SRCs from providing Scope 3 emissions disclosures. Since SRCs are a small fraction of the market, the overall benefit to investors would not be as large as for non-SRCs, while avoiding high fixed costs that could put them at a potential competitive disadvantage.

[949] An AICPA survey of 1,032 reporting companies with $75 million or less in market capitalization in 2018 found an average cost of $5,850 per year, a median cost of $2,500 per year, and a maximum cost of $51,500 per year for fully outsourced XBRL creation and filing, representing a 45% decline in average cost and a 69% decline in median cost since 2014. *See* M. Cohn, *AICPA Sees 45% Drop in XBRL Costs for Small Companies, Accounting Today* (Aug. 15, 2018) (stating that a 2018 NASDAQ survey of 151 listed registrants found an average XBRL compliance cost of $20,000 per quarter, a median XBRL compliance cost of $7,500 per quarter, and a maximum, XBRL compliance cost of $350,000 per quarter in XBRL costs per quarter), *available at* https://www.accountingtoday.com/news/aicpa-sees-45-drop-in-xbrl-costs-for-small-reporting-companies (retrieved from Factiva database). *See also* Letter from Nasdaq, Inc., Mar. 21, 2019 to the Request for Comment on Earnings Releases and Quarterly Reports; Release No. 33-10588 (Dec. 18, 2018) 83 Fed. Reg. 65601 (Dec. 21, 2018).

proposed requirements would also be subject to other Inline XBRL requirements for other disclosures in Commission filings, including financial statement and cover page disclosures in certain periodic reports and registration statements.[950] As such, the proposal would not impose Inline XBRL compliance requirements on filers that would otherwise not be subject to such requirements, and filers may be able to leverage existing Inline XBRL preparation processes and/or expertise in complying with the proposed climate-related disclosure tagging requirements.

We expect that the number of registrants committed to preparing climate-related disclosures will increase in the future, independently from our proposed rules. As discussed in Section IV.B.1, a sizeable and growing portion of global investors consider climate change as the leading issue driving their engagements with companies and is demanding robust disclosure around its impacts and the plan to mitigate climate-related risks. Consistent with this increasing demand for climate-related information, recent trends showed an uptick in climate-related disclosures, particularly within samples of larger firms, though not necessarily through their regulatory filings.[951] Furthermore, the market for related services (e.g., GHG accounting services, auditors, and other consultants, etc.) may become more competitive, driving down costs. To the extent that these trends continue in the future, we would expect that the incremental

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[950] *See* 17 CFR 229.601(b)(101); 17 CFR 232.405 (for requirements related to tagging financial statements (including footnotes and schedules) in Inline XBRL). *See* also 17 CFR 229.601(b)(104); 17 CFR 232.406 for requirements related to tagging cover page disclosures in Inline XBRL. Beginning in 2024, filers of most fee-bearing forms will also be required to structure filing fee information in Inline XBRL, although the Commission will provide an optional web tool that will allow filers to provide those tagged disclosures without the use of Inline XBRL compliance services or software. *See* 17 CFR 229.601(b)(108) and 17 CFR 232.408; Filing Fee Disclosure and Payment Methods Modernization, Release No. 33-10997 (Oct. 13, 2021), 86 FR 70166 (Dec. 9, 2021).

[951] *See* Section IV.A.5

costs for complying with the proposed rules would become lower for an increasing number of firms.

b. Indirect costs

In addition to the direct costs of preparing climate-related disclosures, the proposed rules could also lead to indirect costs. For example, the proposed rules may result in additional litigation risk since the proposed climate-related disclosures may be new and unfamiliar to many registrants.[952] The proposed rules would significantly expand the type and amount of information registrants are required to provide about climate-related risks. Registrants unfamiliar preparing these disclosures may face significant uncertainty and novel compliance challenges. To the extent this leads to inadvertent non-compliance, registrants may face additional exposure to litigation or enforcement action.

However, certain factors may mitigate this concern. First, existing and proposed safe harbors[953] would provide protection from liability for certain statements by registrants, including projections regarding future impacts of climate-related risks on a registrant's consolidated financial statements and climate-related targets and goals. Second, the proposed rules would include phase-in periods after the effective date to provide registrants with sufficient time to become familiar with and meet the proposed disclosure requirements.[954]

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[952] *See supra* note 840.

[953] As previously noted, registrants would be able to use the existing safe harbors for forward-looking statements that were added to the Securities Act and Exchange Act pursuant to the PSLRA assuming all conditions of those safe harbor provisions are met. *See supra* note 219.

[954] Compliance would be required in a registrant's fiscal year ending no earlier than two years after the effective date of any adopted rules. An additional one year phase-in would be provided for registrants that are not large

Another potential indirect cost is the possibility that certain provisions of the proposed rules may force registrants to disclose proprietary information.[955] Under the proposed rules, registrants would be required to disclose a wide range of climate-related information, including potential impacts on its business operations or production processes, types and locations of its operations, products or services, supply chain and/or value chain. Registrants would be further required to disclose whether they have emissions-related targets and metrics or an internal carbon price, and if they do, what they are. To the extent that a registrant's business model or strategy relies on the confidentiality of such information, the required disclosures may put the registrant at a competitive disadvantage.

c. Other cost considerations

Although the proposed rules may impose significant compliance costs, we expect these costs to decrease over time, both from firm-specific and market-wide contexts. From the firm-specific context, registrant disclosing climate-related information for the first time is likely to incur initial fixed costs to develop and implement the necessary processes and controls.[956] Once the firm invests in the institutional knowledge and systems to prepare the disclosures, the

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accelerated filers, while complying with Scope 3 emissions reporting would also be provided with an additional one year phase-in.

[955] Proprietary costs are generally relevant for reporting that involves information about a firms' business operations or production processes and disclosures that are specific, detailed and process-oriented. *See, e.g.,* C. Leuz, A. Triantis, and T. Y. Wang, *Why Do Firms Go Dark? Causes and Economic Consequences of Voluntary SEC Deregistrations*, 45(2) JOURNAL OF ACCOUNTING AND ECONOMICS 181-208 (2008); D.A. Bens, P. G. Berger, and S. J. Monahan, *Discretionary Disclosure in Financial Reporting: An Examination Comparing Internal Firm Data to Externally Reported Segment Data*, 86 (2) THE ACCOUNTING REVIEW 417-449 (2011).

[956] *See* Letter from Financial Executives International's (FEI) Committee on Corporate Reporting (CCR) (June 10, 2021).

procedural efficiency of these processes and controls should subsequently improve, leading to lower costs in following years.[957]

Establishing a framework for standardized climate-related disclosures could also reduce uncertainty for registrants over the specific content to disclose and could mitigate disclosure burdens to the extent that it reduces information requests from third parties. Before registrants can take any tangible steps toward preparing climate-related disclosures, they must first determine which specific climate-related discussions, metrics, and analyses are most appropriate to disclose – a process that, under the current regime, can involve significant uncertainty. Furthermore, the uncertain, complex, and multidimensional nature unique to climate-related risks, combined with the unpredictability of investor responses to such disclosures,[958] can also make it costly for management to determine the risks which meet the materiality threshold.

By implementing a standardized climate disclosure framework, the proposed rules could potentially reduce the burden that registrants may face in the environment of diverging voluntary frameworks and help clarify for registrants what they should disclose, where and when to make their disclosures, and what structure or methodology to use.[959] While a more principles-based approach would provide additional flexibility for registrants, it also may impose certain costs if they are unsure of what climate-related measures are needed to satisfy legal requirements. Such an approach could entail additional judgment on the part of management, or result in registrants erring on the side of caution in complex matters such as climate-related disclosures. This could

[957] The assumption that first year's costs are greater than subsequent years' is consistent with the cost estimation models of the EPA's Greenhouse Gas Reporting Program and the UK's proposal of mandatory TCFD-aligned disclosure.

[958] *See* Section IV.B.2.a.(4)

[959] *See supra* note 806.

ultimately translate into spending more resources to determine appropriate compliance with the Commission's applicable reporting standards. The proposed rules should provide legal certainty around climate-related disclosure and therefore mitigate the compliance burdens associated with the existing regulatory framework.

Furthermore, some registrants currently receive multiple, diverse requests for climate-related information from different parties, such as investors, asset managers, and data service providers. Responding to such third-party request can be costly and inefficient[960] and may put significant and sometimes competing demands on registrants.[961] A standardized climate disclosure framework could potentially reduce information requests from third parties to the extent that such requests overlap with the disclosures required under the proposed rules. We acknowledge, however, that registrants that currently use third-party frameworks to disclose climate-related information may incur certain costs of switching from their existing practice to our proposed disclosure framework.

From a market-wide context, mandated climate disclosures may heighten demand for certain data or third-party services related to preparing the required disclosures, including assistance with the reporting of emissions data. In the short term, there could be a potential increase in the prices of such services to extent that the initial growth in demand exceeds the supply. In the long term, however, this heightened demand is expected to spur competition, innovation, and other economies of scale that could over time lower associated costs for such services and data and improve their availability. Moreover, the aggregate accumulation of

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[960] *Id*.

[961] TCFD*, Status Report: Task Force on Climate-related Financial Disclosures*, (June 2019), *available at* https://www.fsb-tcfd.org/wp-content/uploads/2019/06/2019-TCFD-Status-Report-FINAL-053119.pdf.

institutional knowledge may lead to a broad convergence of disclosure-related best practices, which could further reduce the costs of the proposed disclosures. .

Overall, the market effects deriving from competition and innovation could enhance the efficiency and availability of relevant data and services, thereby lowering costs. These positive externalities from standard reporting practices can provide additional market-wide cost savings to the extent that they reduce duplicative effort in the production and acquisition of information.[962]

D. Anticipated Effects on Efficiency, Competition, and Capital Formation

1. Efficiency

As discussed in Section IV.B.2, the complexity, uncertainty, and long-term nature of climate risks make it unlikely that voluntary disclosure of such risks would be fully revealing. Therefore, as detailed in Section IV.C.1, mandating that climate-related disclosures be presented in a comparable and consistent manner and in a machine-readable language (Inline XBRL) is likely to enhance the information environment for investors. In doing so, the proposed rules are expected to improve market efficiency and price discovery by enabling climate-related information to be more fully incorporated into asset prices. Improved efficiency could inform the flow of capital and allow climate-related risks to be borne by those who are most willing and able to bear them.[963]

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962 *See supra* note 840.

963 A recent study by McKinsey found that 85% of investors either agreed or strongly agreed that "more standardization of sustainability reporting" would help them allocate capital more effectively, and 83% either agreed or strongly agreed that it would help them manage risk more effectively. *See* Sara Bernow et. al., *More Than Values: The Value-Based Sustainability Reporting That Investors Want*, MCKINSEY & COMPANY (Aug. 7, 2019), *available at* https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/Sustainability/Our%20Insights/More%20than%20values%20The%20value%20based%20sustainability%20reporting%20that%20investors%20want/More%20than%20values-VF.pdf.

These expected improvements in market efficiency are broadly consistent with empirical research. If climate-related information is relevant for asset prices, and therefore market efficiency, then the effective disclosure of climate-related information would be expected to cause differential asset price/financing cost responses across firms and settings. Empirical evidence is largely consistent with this expectation. Academic studies have found evidence that among firms that voluntarily report emissions via the CDP questionnaire, those with higher emissions (relative to their size and industry peers) pay higher loan spreads.[964] A recent report from Lazard Ltd. also found a significant relationship between carbon dioxide emissions and a company's price-to-earnings ratio.[965] Even in settings with mandatory disclosure, evidence is consistent with abnormally positive stock returns on announcement date for low-emitters and negative returns for high-emitters.[966]

While the disclosure of climate-related information can improve market efficiency, investor response to such disclosures can vary depending on specific circumstances, thereby highlighting the limitations of the aforementioned studies.[967] For example, if increased

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[964] *See* S. Kleimeier, and M. Viehs, Carbon Disclosure, Emission Levels, and the Cost of Debt, Emission Levels, and the Cost of Debt, SSRN (2018), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2719665.

[965] *See* Lazard Climate Center (2021), *available at* https://www.lazard.com/media/451920/lazard-climate-center-presentation-december-2021.pdf. The report examined more than 16,000 companies from 2016 through 2020 and found that investors are actively and directly pricing some transition risk into valuations, however the effects vary significantly across different types of GHGs, market cap, and sectors. Large cap companies (>$50 billion) experience greater valuation discounts, while big emitters, such as energy companies, showed the starkest correlation. On average, a 10% decrease in a large U.S. energy company's emissions corresponded with a 3.9% increase in its price-to-earnings ratio.

[966] *See supra* note 849 (Jouvenout and Kruger, 2021).

[967] *Id. See also* J. Grewal, E. J. Riedl, and G. Serafeim, Market Reaction to Mandatory Nonfinancial Disclosure, 65 (7) *Management Science* 3061-3084 (2019); *See supra* note 849 (Bolton and Kacperczyk, 2020). The first paper in particular finds a negative aggregate stock market response to the passage of a mandatory ESG disclosure

disclosure causes investors to realize that their portfolios are more exposed to climate risk than previously known, valuations may fall and costs of capital may increase as investors reallocate capital to balance this risk. Further, aggregate pricing effects could also be due to a better understanding of future regulatory risks firms face.[968] Studies find, however, that cumulative abnormal stock returns around the announcement date are negatively correlated with firms' mandatorily disclosed emission levels. This consistent with mandatory reporting of climate-related information improving price discovery and market efficiency.

Empirical research has also documented evidence of market inefficiencies with respect to climate-related risks. For example, one study finds that stock prices of food companies (i.e. food processing and agricultural companies) may exhibit mispricing with respect to drought exposure.[969] The study documents that drought-exposed firms report reduced future profitability, indicating that drought exposure is a financial risk. In an efficient market, this risk should result in trading activity that decreases the current stock price and increases the expected return (to compensate investors for bearing this risk). The study, however, finds that drought-exposed firms deliver *lower* future returns relative to firms with less exposure, suggesting that the market

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rules in the EU. These results, however, should be interpreted with caution. For one, the empirical design is based on matching, but there are reasons to believe that the treatment and control groups differ along important dimensions. Further, there is no event study plot, and results are not shown for cumulative abnormal returns after controlling for common risk factors like the Fama-French 3-factor model. It is therefore difficult to discern whether the passage of the disclosure rules is actually driving the aggregate market response.

[968] For example, the passage of disclosure rules may signal more stringent enforcement of emissions rules going forward, leading to an increase in the risk of regulation. Therefore, it is difficult to disentangle the pure effect of disclosure rules on stock performance and the cost of capital.

[969] *See* H. Hong, F.W. Li, J. Xu. *Climate Risks And Market Efficiency*, 208.1 JOURNAL OF ECONOMETRICS 265-28 (2019).

initially under-reacts to drought exposure. In other words, the market may fail to sufficiently incorporate the risk of drought exposure into the current stock price, resulting in investors holding mispriced assets and bearing risk for which they are not appropriately compensated. Another study finds, through similar reasoning, that stock prices may exhibit mispricing with respect to temperature changes induced by climate change.[970] According to survey evidence of global institutional investors, respondents believe that equity valuations do not fully reflect climate-related risks.[971] Mandatory disclosures may help address these inefficiencies as it would provide investors with the information necessary to better incorporate climate-related risks into asset prices.

These capital market benefits can be further strengthened by the requirement to tag the climate-related disclosures in Inline XBRL, as XBRL requirements have been observed to reduce informational advantages of informed traders, increase stock liquidity, and reduce cost of capital.[972] These benefits may also have valuation implications. The discounted cash flow model

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970 *See, e.g.*, K. Alok, W. Xin, C. Zhang, *Climate Sensitivity And Predictable Returns*, *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3331872.

971 *See* P. Krueger, Z. Sautner, L.T. Starks, *The Importance of Climate Risks for Institutional Investors*, 33(3) THE REVIEW OF FINANCIAL STUDIES, 1067-1111 (2020).

972 *See, e.g.*, N. Bhattacharya, Y.J. Cho, J.B. Kim, *Leveling the Playing Field Between large and Small Institutions: Evidence from the SEC's XBRL Mandate*, 93(5) THE ACCOUNTING REVIEW 51-71 (2018); B. Li, Z. Liu, W. Qiang, and B. Zhang, *The Impact of XBRL Adoption on Local Bias: Evidence from Mandated U.S. Filers*, 39(6) JOURNAL OF ACCOUNTING AND PUBLIC POLICY (2020); W. Sassi, H. Ben Othman, and K. Hussainey, *The Impact of Mandatory Adoption of XBRL on Firm's Stock Liquidity: A Cross-Country Study*, 19(2) JOURNAL OF FINANCIAL REPORTING AND ACCOUNTING 299-324 (2021); C. Ra and H. Lee, *XBRL Adoption, Information Asymmetry, Cost of Capital, and Reporting Lags*, 10 IBUSINESS, 93-118 (2018); S.C. Lai, Y.S. Lin, Y.H. Lin, and H.W. Huang, XBRL *Adoption and Cost of Debt*, INTERNATIONAL JOURNAL OF ACCOUNTING & INFORMATION MANAGEMENT (2015); Y. Cong, J. Hao, and L. Zou, *The Impact of XBRL Reporting on Market Efficiency*, 28(2) JOURNAL OF INFORMATION SYSTEMS 181-207 (2014).

illustrates how, all else equal, a drop in the cost of capital leads to a boost in equity valuation, which can further benefit investors.

There are also important efficiency implications in relation to systemic risks.[973] The increasing frequency and severity of climate events can potentially lead to destabilizing losses for insurance companies,[974] banks,[975] and other financial intermediaries with direct and indirect exposures to different affected industries and assets. Some commentators state that, in addition to physical risks, the financial system could be destabilized also by potentially rapid and unexpected losses to carbon-intensive assets caused by a disorderly transition to a low-carbon economy or a shift in the market's perception of climate risks.[976] With insufficient and inconsistent disclosures, asset prices may not fully reflect climate-related risks. Consequently, market participants may inadvertently accumulate large exposures to such risks, leaving them vulnerable to considerable unexpected and potentially sudden losses. [977]

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[973] Systemic risk refers to the risk of a breakdown of an entire system, rather than simply the failure of individual parts. In a financial context, systematic risk denotes the risk of a cascading failure in the financial sector, caused by linkages within the financial system, resulting in a severe economic downturn.

[974] *See Facts + Statistics: Global Catastrophes*, INSURANCE INFORMATION INSTITUTE, *available at* https://www.iii.org/fact-statistic/facts-statistics-global-catastrophes.

[975] The Office of the Comptroller of the Currency (OCC) recently requested feedback on draft principles designed to support the identification and management of climate-related financial risks at OCC-regulated institutions with more than $100 billion in total consolidated assets. *See Principles for Climate-Related Financial Risk Management for Large Banks*, Office of the Comptroller of the Currency (2021), *available at* https://occ.gov/news-issuances/news-releases/2021/nr-occ-2021-138.html?source=email.

[976] Gregg Gelzinis and Graham Steele, *Climate Change Threatens the Stability of the Financial System*, CENTER FOR AMERICAN PROGRESS (Nov. 21, 2019, 12:01 a.m.), *available at* https://www.americanprogress.org/issues/economy/reports/2019/11/21/477190/climate-change-threatens-stability-financial-system.

[977] *See The Availability Of Data with Which to Monitor and Assess Climate-Related Risks to Financial Stability*, The Financial Stability Board ("FSB") (July 7, 2021) (stating that the availability of data with which to monitor

In the face of such losses, financial intermediaries may be forced to sell off assets at fire-sale prices to generate enough cash to pay claims or to otherwise meet the time-sensitive cash demands of creditors and counterparties. This fire-sale dynamic could push down asset prices as well as the value of firms holding similar assets due to mark-to-market losses, potentially increasing risk premia and correlations across asset classes.[978] Stress from large, complex, and interconnected financial institutions, or correlated stress across smaller market participants, could be transmitted and propagate through the financial system,[979] causing disruptions in the provision of financial services.[980] A more efficient allocation of capital brought about the disclosure required by the proposed rules could reduce the probability and magnitude of disorderly price corrections or dislocations, thereby strengthening financial system resilience.[981]

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and assess climate-related risks to financial stability), *available at* https://www.fsb.org/2021/07/the-availability-of-data-with-which-to-monitor-and-assess-climate-related-risks-to-financial-stability/.

978 *The Implications of Climate Change for Financial Stability*, FSB, *available at* https://www.iii.org/fact-statistic/facts-statistics-global-catastrophes (2021).

979 Physical risks can have immediate and direct effects on asset values, but they also present long-term indirect risks. By damaging assets that serve as collateral for loans or that underpin other investments, reducing property values, increasing insurance premiums or decreasing insurance coverage, diminishing agricultural capacity, and causing labor forces to migrate, the physical consequences of climate change could have profound and long term effects on financial markets more generally. *See* Jonathan Woetzel et al., *Climate Risk and Response: Physical Hazards and Socioeconomic Impacts*, McKinsey Global Institute (Jan. 2020), *available at* https://www.mckinsey.com/business-functions/sustainability/our-insights/climate-risk-and-response-physical-hazards-and-socioeconomic-impacts.

980 A recent report by an advisory committee to the Commodity Futures Trading Commission (CFTC) concluded that "climate change poses a major risk to the stability of the U.S. financial system and to its ability to sustain the American economy." *See* Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission, Managing Climate Risk in the U.S. Financial System (2020). The Office of the Comptroller of the Currency (OCC) has identified the effects of climate change and the transition to a low carbon economy as presenting emerging risks to banks and the financial system. *See, e.g.,* Semiannual Risk Perspective, 2-4 (Fall 2021), *available at* https://www.occ.treas.gov/publications-and-resources/publications/semiannual-risk-perspective/files/pub-semiannual-risk-perspective-fall-2021.pdf.

981 *See The Availability Of Data with Which to Monitor and Assess Climate-Related Risks to Financial Stability*, (July 7, 2021) (stating that the availability of data with which to monitor and assess climate-related risks to financial stability), *available at* https://www.fsb.org/2021/07/the-availability-of-data-with-which-to-monitor-and-assess-climate-related-risks-to-financial-stability/.

2. Competition

The provisions included in the proposed rules are expected to increase comparability among registrants by demanding climate-related information in a consistent manner and with machine-readable data language (Inline XBRL). More standardized climate reporting could improve competition among registrants as it could reduce their costs for both producing such information due to enhanced efficiencies of scale across the economy and the cost for acquiring and processing said information by investors.

As discussed in Section IV.C.2, positive externalities from standard reporting practices can provide market-wide cost savings to registrants in the long-term, to the extent that they reduce duplicative effort in registrants' production and acquisition of information (e.g. certain data or third-party services related to preparing the required disclosures, including the reporting of emissions data, may become cheaper in the long run as the heightened demand spur competition, innovation, and other economies of scale). These cost savings could be particularly helpful for smaller registrants, or those that are capital constrained, which otherwise may not be able to provide the same amount, or level of detail, of climate-related disclosures as registrants with greater resources.

More standardized reporting should also reduce investors' costs for acquiring and processing climate-related information by facilitating investors' analysis of a registrant's disclosure and assessing its climate-related risks against those of its competitors. The placement of climate-related information in SEC filings with machine-readable data language (Inline XBRL), rather than external reports or company websites, should also make it easier for investors to find and compare this information.

Overall, we expect that by standardizing reporting practices, the proposed rules would level the playing field among firms, making it easier for investors to assess the climate-related risks of a registrant against those of its competitors. The effects of peer benchmarking can contribute to increased competition for companies in search for capital both across and within industries, whereby firms can be more easily assessed and compared by investors against alternative options.

Failure to implement the proposed rules could lead to an informational gap between U.S. registrants and companies operating in foreign jurisdictions which require climate-related disclosures. For example, such a gap may increase investors' uncertainty when assessing climate-related risks of U.S. registrants vis-à-vis foreign competitors and place U.S. registrants at a competitive disadvantage, with the potential to deter investments and hence increase U.S. registrants' cost of capital. This informational gap may also pose obstacles to U.S. companies transacting with counterparts and businesses in their supply-chain operating in foreign jurisdictions which require Scope 3 emission disclosures. According to Morningstar, more than 35% of S&P 500 firms' total revenues came from foreign markets, while this percentage is around 20% for the revenues of Russell 2000 firms.[982] Lack of standardized disclosures around Scope 1 and 2 GHG emission by U.S. companies, which may in part be due to the aforementioned impediments to voluntary disclosure,[983] may obstruct foreign counterparts from accurately assessing their Scope 3 GHG emissions, thus putting U.S. registrants at a competitive disadvantage over other foreign companies which may be publically disclosing such information.

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[982] See, https://www.morningstar.com/articles/918437/your-us-equity-fund-is-more-global-than-you-think

[983] *See* Section IV.B.2.

3. Capital formation

More consistent, comparable, and reliable disclosures could lead to capital-market benefits in the form of improved liquidity, lower costs of capital, and higher asset prices (or firm valuations).[984] Enhanced disclosures (e.g., accurate GHG emissions disclosures) can reduce the time necessary for processing registrant's relevant information, thus increasing efficiency for registrants in their access to capital and allowing the market to more efficiently assess its cost. These benefits would stem from reductions in information asymmetries brought about by the required disclosure of climate-related information. More comparable, consistent, and reliable climate-related disclosures could reduce information asymmetries, both among investors and between firms and their investors.

In the first case, less information asymmetry among investors could mitigate adverse selection problems by reducing the informational advantage of informed traders.[985] This is likely to improve stock liquidity (i.e., narrower bid-ask spreads), which could attract more investors and reduce the cost of capital. In the second case, less information asymmetry between firms and their investors could allow investors to better estimate future cash flows, which could reduce

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[984] *See* D.W. Diamond and R.E. Verrecchia, Disclosure, Liquidity, and the Cost of Capital, 46 *J. Fin.*1325 (1991) (this study finds that revealing public information to reduce information asymmetry can reduce a firm's cost of capital through increased liquidity); See also C. Leuz and R.E. Verrecchia, The Economic Consequences of Increased Disclosure, 38 *J. Acct. Res*. 91 (2000). Several studies provide both theoretical and empirical evidence of the link between information asymmetry and cost of capital. *See, e.g.*, T.E. Copeland and D. Galai, *Information Effects on the Bid-Ask Spread*, 38 J. FIN. 1457 (1983) (proposing a theory of information effects on the bid-ask spread); D. Easley and M. O'Hara, *Information and the Cost of Capital*, 59 J. FIN. 1553 (2004) (This study shows that differences in the composition of information between public and private information affect the cost of capital, with investors demanding a higher return to hold stocks with greater private information.).

[985] *See* R.E. Verrecchia, *Essays on Disclosure*, 32(1-3) JOURNAL OF ACCOUNTING AND ECONOMICS 97-180 (2001).

investors' uncertainty, as well as the risk premium they demand, thus lowering the costs of capital.[986]

Recent studies provide some supporting empirical evidence of these effects within the context of ESG- or climate-related disclosure. These studies have found that, when firms voluntarily provide material sustainability disclosures, they also experience improvements in liquidity (e.g. smaller bid-ask spreads).[987] In addition, firms that choose to disclose emissions have lower costs of equity and loan spreads.[988] While firms' decisions about whether and when to disclose emissions data may be correlated with other factors as well asset prices/financing costs, this would be consistent with such disclosures reducing the costs of capital for firms (to the extent that some of these effects are driven by the disclosures themselves).

E. Other Economic Effects

The proposed rules may have some effects on firm behavior. Prior empirical evidence supports the notion that, in response to mandatory ESG-related disclosure rules, firms tend to report actions that appear more "favorable" with respect to the corresponding disclosures. These decisions would be made by a firm's management with the goal of maximizing firm value in

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[986] *See supra* note 840*; See also* D.W. Diamond and R.E. Verrecchia, *Disclosure, Liquidity, and the Cost of Capital*, 46(4) THE JOURNAL OF FINANCE 1325-1359 (1991).

[987] *See* J. Grewal, C. Hauptmann, and G. Serafeim, *Material Sustainability Information and Stock Price Informativeness*, JOURNAL OF BUSINESS ETHICS 1-32 (2020); M.E. Barth, S.F. Cahan, L. Chen, and E.R. Venter, *Integrated Report Quality: Share Price Informativeness and Proprietary Costs*, SOCIALLY RESPONSIBLE INVESTMENT EJOURNAL (2021).

[988] *See* D.S. Dhaliwal et al, *Voluntary Nonfinancial Disclosure And The Cost Of Equity Capital: The Initiation Of Corporate Social Responsibility Reporting*, 86.1 THE ACCOUNTING REVIEW 59-100 (2011; S. Kleimeier, and M. Viehs, *Carbon Disclosure, Emission Levels, and the Cost of Debt, Emission Levels, and the Cost of Debt* (2018); E.M. Matsumura, R. Prakash, and S.C. Vera-Munoz. *Climate Risk Materiality and Firm Risk*, *available at* SSRN 2983977 (2020).

response to the new disclosure mandate. To the extent that these actions reduce firms' exposures to physical and transition risks, this could lower the return that investors require for investing in these firms, hence facilitating capital formation. This could reduce volatility of stock returns due to enhanced resiliency against such risks.

Empirical evidence shows that mandatory reporting of GHG emissions results in reduced aggregate reported emissions among affected firms.[989] Academic research shows that mandatory ESG-related disclosure often contributes, not only to increased monitoring by investors or other stakeholders, but also to enhanced peer benchmarking by firms as they can more easily compare themselves with their competitors.[990] These changes may reflect market responses by companies and investors to the newly disclosed information. Accordingly, registrants may change their behavior in response to the proposed disclosure requirements by reducing exposures to certain physical or transition risks. However, this could also come with the potential cost of lower productivity, profitability, or market share in the short-term.

Registrants might respond to the proposed disclosures by devoting more resources to climate-related governance and risk management in an effort to address indirect effects on their business arising from the disclosures. For example, the proposed rules require disclosure of members of the board or management that have prior climate expertise. Some registrants may respond by giving more weight to climate expertise when searching for directors, which may lead them to deviate from the board composition that would have been in place absent the

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989 *See* B. Downar, J. Ernstberger, S. Reichelstein, S. Schwenen, and A. Zaklan, *The Impact of Carbon Disclosure Mandates on Emissions and Financial Operating Performance*, REVIEW OF ACCOUNTING STUDIES 1-39 (2021); S. Tomar, *Greenhouse Gas Disclosure and Emissions Benchmarking* (Working Paper) (2021), *available at*: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3448904; *See supra* note 849 (Jouvenout and Kruger, 2021).

990 *See supra* note 840.

proposed rules. Similarly, the proposed rules would require disclosure on how climate-related risks can impact registrants' consolidated financial statements, among others. Registrants may respond by taking measures to minimize negative impacts in order to put forth more favorable metrics. For example, registrants may move assets or operations away from geographic areas with higher physical risk exposures or may seek to decrease GHG emissions.

The provision on GHG Emissions would also require scope 1, 2, and 3 (if material or the registrant has a set a target or goal for scope 3) emission disclosures. These emission disclosures may induce firms to use peer benchmarking to decide whether to investigate and reevaluate their energy usage[991] or otherwise reduce emissions based on anticipated market reactions to the disclosed information. This process may provide certain registrants with incentives to search for alternative energy sources or find different suppliers, which could increase costs. Conversely, it could also prompt certain firms to reduce nonessential activities and improve operational efficiency, which could lead to lower operating costs.

The provision requiring assurance of GHG Scopes 1 and 2 emissions disclosures would only apply to accelerated filers. Non-accelerated filers would, instead, be required only to state whether any of their GHG emissions disclosures were subject to third-party assurance, and if so, at what level. By asking all registrants, including non-accelerated filers, to disclose climate-related information within SEC filings, however, the proposed rules may motivate more non-accelerated filers to voluntarily seek assurance over these types of disclosures, than if the same information had been disclosed on companies' websites or sustainability reports. Certain non-accelerated filers may also voluntarily decide to attain assurance over their GHG emission

[991] *See supra* note 840.

disclosures in order to enhance their reliability and prevent these disclosures from being perceived by investors as less reliable compared to those provided by accelerated filers.

As another example, the proposed rules would require the disclosure of the location (via ZIP code) of firm assets or operations, which could allow investors to assess firms' exposures to physical risk at a more granular level. This may allow investors to more easily diversify these geographic-driven risks or expose themselves to such risks, if they choose to, more deliberately. This may cause some firms to relocate assets or operations to geographical areas less exposed to physical risks and/or give preferences to such areas for future business activity. It may also cause some firms with higher geographic exposures to physical risks to alter overall operational risk and strategies.

The proposed rules might also affect the networks firms choose to operate in. For example, a firm may choose to change some suppliers or disengage with certain clients due to the effect that they may have on the firm's Scope 3 emissions. This may be particularly relevant for certain financial institutions that are impacted by their portfolio firms' emissions or climate-related risks. These financial institutions may be less willing to extend credit to firms for which it is difficult to measure climate risk exposure information, potentially increasing the cost of capital for these firms.

However, there are certain factors that may mitigate this effect. First, the proposed rules establish a phase-in period, which is intended to give financial institutions and their prospective borrowers sufficient time to prepare the required disclosures. Second, analytical tools, data, and related methodologies (such as those related to measuring/reporting GHG emissions) are developing rapidly and increasing in availability. Finally, frameworks like the PCAF to measure financed emissions would allow financial institutions to compute proxies for the emissions of their clients in a systematic and comparable manner even in the absence of actual emissions data.

The proposed rules could also cause some firms to pursue avoidance strategies. The provision on Targets and Goals would require a registrant to disclose whether it has set any climate-related targets or goals and the specific plans in place to achieve those objectives and metrics to monitor progress. This may disincentivize certain firms from making such commitments and providing the associated disclosures in SEC filings. Risk of litigation or enforcement actions, could result in registrants being more cautious in their decision to set climate-related targets. Other firms, however, may find the existence of mandatory disclosures around climate-related targets and goals to be beneficial for signaling credible value-enhancing commitments to investors. More credible and standardized disclosures on climate-related targets and goals could make registrants' communication more effective and facilitate investors' understanding of related progress, hence providing additional incentives for making such commitments.

More generally, if compliance costs with the proposed rules are high, this could influence the marginal firm's decision to exit public markets or refrain from going public in the first place in order to circumvent the disclosure requirements. Firms may choose this strategy if they believe the potential compliance costs from the proposed rules outweigh the benefits of being registered public company. Uptake of this avoidance strategy may widen the transparency gap between public and private firms, negatively affecting capital markets' information efficiency, and potentially reduce the size of the stock market. However, it is unlikely that a significant number of firms would pursue this avoidance strategy given that it would come with significant disadvantages, such as higher costs of capital, limited access to capital markets, and limits to their growth potential. Moreover, recent trends in private markets indicate that industry's top leaders are working toward a standard set of metrics for tracking their portfolio companies' ESG progress. The pressure on private companies to disclose information on climate-related risks is rapidly escalating within the private industry, hence diminishing the potential incentive for registrants to go private in order to avoid climate-related disclosure requirements. For example, since its launch in September 2021, the ESG Data Convergence Project, which seeks to standardize ESG metrics and provide a mechanism for comparative reporting for the private market industry, has announced a milestone commitment of over 100 leading general partners and limited partners to its partnership representing $8.7 trillion USD in AUM and over 1,400 underlying portfolio companies across the globe. The initial data for the project includes, among others, greenhouse gas emissions and renewable energy metrics.[992]

F. Reasonable Alternatives

1. Requirements limited to only certain classes of filers

One alternative would be to require the proposed disclosures only from larger registrants, such as large accelerated filers or non-SRCs. While the proposed rules already provide certain exemptions for SRCs (e.g., Scope 3 emissions disclosures and assurance requirements), this alternative would exempt smaller registrants from the entirety of the proposed rules. The main benefit of this alternative is that it would avoid imposing potentially significant compliance costs on smaller registrants, which are more likely to be resource-constrained. However, considering that SRCs make up approximately 50% of registrants (and registrants that are not large

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[992] *See* Carlyle, Private Equity Industry's First-Ever ESG Data Convergence Project Announces Milestone Commitment of Over 100 LPs and GPs (Jan. 28, 2022), *available at* https://www.carlyle.com/media-room/news-release-archive/private-equity-industrys-first-ever-esg-data-convergence-project-announces-over-100-lps-gps.

accelerated filers make up approximately 70%), this alternative would also considerably undermine one of the primary objectives of the proposed rules, which is to achieve consistent, comparable, and reliable disclosures of climate-related information. Furthermore, climate-related risks are impacting or are expected to impact every sector of the economy,[993] further highlighting the need for enhanced disclosures from all registrants. In an effort to arrive at an appropriate balance between these costs and benefits, the proposed rules exempt SRCs from some, but not all, disclosure requirements.

2. Require scenario analysis

Another alternative would be to require registrants to conduct scenario analysis and include the related information in their disclosures. Consistent, comparable, and reliable disclosures of scenario analysis could inform investors with respect to the resilience of registrants' business strategies and operations across a range of plausible future climate scenarios. Disclosure of scenario analysis could deliver informational benefits to investors beyond that which would be provided under the proposed rules. It could help investors assess issues that have high uncertainty by evaluating the impact on and the resiliency of the registrant under multiple plausible future scenarios, such as a temperature increase of 1.5°C, 2°C, and 3°C above pre-industrial levels. It could also allow investors to proactively manage risk as they would be better able to assess the range of potential threats and opportunities, evaluate different management actions, and adapt accordingly. Furthermore, since some climate-related risks may

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[993] SASB research shows climate risk is nearly ubiquitous but highly differentiated across 77 industries. *See SASB Publishes Updated Climate Risk Technical Bulletin* (Apr. 13, 2021), available at https://www.globenewswire.com/news-release/2021/04/13/2208855/0/en/SASB-Publishes-Updated-Climate-Risk-Technical-Bulletin.html.

only manifest over longer horizons, scenario analysis could assist investors in determining whether registrants have incorporated such risks into their long-term strategy. Investors could subsequently incorporate this information into asset prices, thereby more accurately pricing climate-related risks and contributing to market efficiency.

Both scenario analysis methodologies and climate science, however, continue to advance and develop, which may pose significant challenges for some registrants. Specifically, the required data may be unavailable or costly to obtain. Furthermore, some registrants may lack the necessary expertise, requiring them to hire external consultants to conduct the analysis. These challenges may pose undue burdens with respect to difficulty and/or costs to some registrants, such as smaller companies and those that otherwise have no prior experience in scenario analysis. For these reasons, the Commission is not proposing to mandate scenario analysis and related disclosure at this time.

3. Require specific external protocol for GHG emissions disclosure

Another alternative would be to require registrants to follow an external protocol (e.g., GHG protocol) for reporting emissions. Requiring a specific protocol may potentially benefit investors by providing a more consistent and comparable framework in reporting emissions, thus facilitating investors' information processing. However, there also may be certain drawbacks.

First, the organizational boundaries adopted by external protocols may create inconsistencies with the way companies would report information about their GHG emissions vis-à-vis the rest of their financial statements. The GHG Protocol, for example, requires that a company base its organizational boundaries on either an equity share approach or a control approach, which may differ from the way registrants set their scope for the purpose of reporting information in their financial statements. The proposed rules would require a registrant to set the organizational boundaries for its GHG emissions disclosure using the same scope of entities, operations, assets, and other holdings as those included in its consolidated financial statements. Requiring a consistent scope of consolidation and reporting between financial data and GHG emissions data should help avoid potential investor confusion about the reporting scope used in determining a registrant's GHG emissions and the reporting scope used for the financial statement metrics.

Furthermore, requiring companies to follow a specific external protocol might limit flexibility for registrants and thus reduce their ability to report emissions in a manner that is tailored to their specific circumstances. For example, registrants following an existing but different protocol, which nevertheless provides relevant emissions information, would be required to switch protocols, incurring additional cost.

Requiring compliance with a specific protocol could also reduce the scope for innovation in driving the most appropriate forms of disclosure within these overarching guidelines (e.g., the methodologies pertaining to the measurement of GHG emissions, particularly Scope 3 emissions, are still evolving). Additionally, requiring compliance with a specific external protocol as of the date of the adoption of any final rules may become problematic in the future to the extent that the external protocol's methodologies shift or evolve such that the version incorporated by reference into the final rules becomes outdated or inconsistent with improving methodologies. While we expect that many registrants will choose to follow many of the standards and guidance provided by the GHG Protocol when calculating their GHG emissions, not requiring compliance with the GHG Protocol would provide some flexibility to the Commission's climate-related disclosure regime and enable registrants to follow new and potentially less costly methodologies as they emerge.

4. Permit GHG emissions disclosures to be "furnished" instead of "filed"

Another alternative would be to permit Scopes 1, 2, and 3 emissions disclosures to be considered "furnished" instead of "filed," which may limit the incremental risk of being held liable under Section 18 of the Exchange Act for these disclosures. This may also benefit some registrants as their Scopes 1 and 2 emissions disclosures would not be automatically incorporated into Securities Act registration statements and thereby not be subject to Section 11 liability. We note that this could have a lower incremental impact on Scope 3 emissions disclosures since Scope 3 emissions disclosures are covered under a proposed safe harbor provision and hence already afforded other liability protections. However, reduced liability in general may lead to the applicable disclosures being perceived as less reliable by investors, which could have adverse effects on registrants' stock liquidity or costs of capital. For these reasons, the Commission is not proposing to permit emissions disclosures to be furnished at this time.

5. Do not require Scope 3 emissions for registrants with a target or goal related to Scope 3

Another alternative would be to not require Scope 3 emissions disclosures if such emissions are part of a target or goal from any registrant. This would allow certain registrants to avoid the potentially significant costs and difficulties associated with measuring and reporting Scope 3 emissions. This could potentially deprive investors of important information necessary to assess registrants' exposures to certain risks associated with trying to achieve targets or transition plans. Scope 3 emissions can provide investors with a more complete picture of how targets or transition plans might impact risks (*e.g.*, future regulations restricting emissions or changes in market conditions that disfavor high emissions products or services) of the registrant through the value chain. This can be particularly important considering that Scope 3 emissions can make up the vast majority of total emissions for many registrants.[994] Furthermore, some firms can give the appearance of low (direct) emissions by shifting high-emission activities elsewhere in their value chain.[995] Mandatory disclosure of Scope 3 emissions for registrants with a target or goal related to Scope 3 emissions can help prevent such misrepresentation.

6. Exempt EGCs from Scope 3 emissions disclosure requirements

Another alternative would be to retain the exemption for SRCs, as currently proposed, but also extend it to EGCs. EGCs may similarly face resource constraints related to company size or age, hence this alternative would allow EGCs to avoid the costs of Scope 3 emissions measurement and reporting. Given that the designations of SRC and EGC are not mutually exclusive, however, EGCs that are also SRCs would be covered under the exemption as currently proposed. Conversely, EGCs that are *not* SRCs are relatively less resource-constrained since they, by definition, have greater revenues and/or public float, and therefore may be better positioned to provide Scope 3 emissions disclosures.

7. Eliminate exemption for SRCs from Scope 3 reporting

Another alternative would be to eliminate the exemption for SRCs. Because SRCs make up approximately half of domestic filers in terms of numbers (though considerably less in terms of market cap), this alternative could address data gaps with respect to Scope 3 emissions, with the potential to benefit all investors. As discussed in Section II.G.3, however, this alternative may pose fixed costs (e.g. data gathering and verification), that would fall disproportionately on

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994 *See supra*, note 881.

995 *See supra*, note 886.

SRCs. Also, because SRCs are a small fraction of the market, the overall benefit to investors would be limited.

8. Remove safe harbor for Scope 3 emissions disclosures

The proposed rules provide a safe harbor for Scope 3 emissions disclosures. An alternative would be to remove this safe harbor for Scope 3 emissions disclosures. This alternative would strengthen accountability for Scope 3 emissions disclosures. It also would significantly increase registrants' exposure to litigation over the accuracy of such disclosures. While rigorous liability in many contexts can provide incentives that promote reliable disclosures, an accommodation may be warranted for Scope 3 emissions due to the challenges associated with their measurement and disclosure.[996]

9. Require large accelerated filers and accelerated filers to provide a management assessment and to obtain an attestation report covering the effectiveness of controls over GHG emissions disclosures.

The proposed rules would require assurance over Scopes 1 and 2 emissions disclosure from large accelerated filers and accelerated filers. In addition to such assurance, we could require these filers to also obtain either a separate assessment by management and disclosure on the effectiveness of controls over GHG emissions disclosures or an attestation report specifically covering the effectiveness of controls over GHG emissions disclosures, or both. Specifically, management could be required to include a statement in the annual report on their responsibility for the design and evaluation of controls over GHG emission disclosures, as well as to disclose their conclusion regarding the effectiveness of controls over GHG emissions disclosures, in

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[996] *See* Section II.G.3

addition to the existing DCP evaluation and disclosure. In addition, we could require a GHG emissions attestation provider to obtain reasonable assurance on whether material weaknesses exist regarding management's assessment of the effectiveness of controls over GHG emissions disclosures as of the measurement date. The GHG emissions attestation provider could also be required to issue an attestation report on the effectiveness of controls over GHG emissions disclosures.[997]

By requiring GHG emissions attestation providers to assess not just the disclosures, but also the controls over GHG emissions disclosures (*i.e.*, the underlying mechanisms, rules, and procedures associated with generating such disclosures), this alternative could further strengthen the integrity of the disclosed information. In the context of emissions, GHG emissions attestation providers may evaluate and test the effectiveness of registrants' controls related to the collection, calculation, estimation, and validation of GHG emissions data and disclosure. These processes could strengthen disclosure credibility as they reduce the likelihood of errors or fraud and their ensuing misstatements.[998] Investors would benefit from any resulting improvement in disclosure reliability for reasons discussed in prior sections: it would allow investors to make better-informed investment decisions, allow applicable information to be better incorporated into

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[997] *See* AICPA, AU-C 940, *An Audit of Internal Control Over Financial Reporting That Is Integrated With an Audit of Financial Statements* (2021), *available at* https://www.aicpa.org/content/dam/aicpa/research/standards/auditattest/downloadabledocuments/au-c-00940.pdf.

[998] Potentially consistent with this, though in a different setting, academic evidence surrounding Section 404 of the Sarbanes-Oxley Act (SOX) finds lower accruals and discretionary accruals for small firms whose 2002 float (prior to when firms could have known and therefore tried to alter their float to avoid the regulation) made them likely to be just above the requirements for compliance, relative to those just below. Iliev, Peter (2010). The effect of SOX Section 404: Cost, earnings quality and stock prices. Journal of Finance, 65, 1163-1196.

asset prices, and contribute to a more efficient allocation of capital. Registrants may also benefit via reduced costs of capital and increased stock liquidity.

However, this alternative would also impose additional assurance costs.[999] Given that GHG emissions measurement and disclosure are developing areas, it is unclear what exact controls are or would be in effect, making it difficult to anticipate precisely what such attestation would entail. These uncertainties pose further difficulties in obtaining informative cost estimates and, accordingly, accurate assessments of how burdensome such a requirement would be to registrants. This leaves the possibility that the costs could outweigh the incremental benefits given that the proposed rules already require assurance for Scopes 1 and 2 emissions disclosures for applicable registrants. For these reasons, the Commission is not proposing at this time to require an attestation report on the effectiveness of controls over GHG emissions disclosures.

10. Require reasonable assurance for Scopes 1 and 2 emissions disclosures from all registrants.

Another alternative would be to require reasonable assurance for Scopes 1 and 2 emissions disclosures from all registrants. As described above, requiring assurance can benefit investors in several ways, including enhanced reliability of disclosures, which would allow investors to make better-informed investment decisions

[999] Also potentially consistent with this, prior academic studies of Section 404 of SOX find significantly higher auditing fees, negative stock returns, and reduced innovation, though no clear evidence of a decline in investment, for marginally complying small firms near the float requirement threshold. *See* Iliev, Peter (2010). The effect of SOX Section 404: Cost, earnings quality and stock prices. Journal of Finance, 65, 1163-1196; Gao, Huasheng, and Jin Zhang (2019). SOX Section 404 and corporate innovation. Journal of Financial and Quantitative Analysis 54(2): 759-787; Albuquerque, Ana and Julie Lei Zhu (2019). Has Section 404 of the Sarbanes-Oxley Act discouraged corporate investment? New evidence from a natural experiment. Management Science 65(7): 3423-3446.

However, because costs increase with the level of assurance, requiring reasonable assurance may be particularly burdensome for affected registrants (*i.e.,* smaller firms) as they would be more likely to incur proportionately higher compliance costs due to the fixed cost components of such compliance, regardless of whether or not there is a transition period before this requirement takes effect. While the benefits of assurance could be approximately proportional to registrant's market value, the costs are not. In an effort to arrive at an appropriate balance between these factors, the proposed rules would require reasonable assurance (after a specified transition period) only from large accelerated filers and accelerated filers because the benefits to investors are more likely to justify the costs for these firms.

11. Require limited, not reasonable, assurance for large accelerated filers and/or accelerated filers and/or other filers.

Obtaining reasonable assurance generally costs more than obtaining limited assurance. Current market practice appears to favor obtaining limited assurance over sustainability reports, if assurance is obtained at all. Experimental evidence suggests assurance (relative to none) may increase perceived reliability of sustainability reports, but is yet to provide evidence that reasonable assurance increases perceived reliability of sustainability reports relative to limited assurance.[1000] We acknowledge, however, that experimental findings from lab settings may not necessarily reflect the behavior or preferences of experienced investors in actual financial

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[1000] *See, e.g.,* K. Hodge, K., N. Subramaniam, and J. Stewart, *Assurance of Sustainability Reports: Impact on Report Users' Confidence and Perceptions of Information Credibility*, 19 AUSTRALIAN ACCOUNTING REVIEW 178-194 (2009), *available at* https://doi.org/10.1111/j.1835-2561.2009.00056.x; Mark Sheldon, *User Perceptions of CSR Disclosure Credibility with Reasonable, Limited and Hybrid Assurances* (Dissertation) (2016) *available at* https://vtechworks.lib.vt.edu/bitstream/handle/10919/65158/Sheldon_MD_D_2016.pdf.

markets. Furthermore, other research often exhibits a selection bias (*i.e.,* companies that voluntarily decide to obtain a higher-than-required level of assurance are systematically different across several dimensions), making it difficult to determine the causal effect of the different levels of assurance.[1001]

One possibility to mitigate the additional costs of reasonable assurance would be to maintain the requirement that large accelerated filers obtain reasonable assurance, but allow accelerated filers to obtain limited assurance without any scaling up to a reasonable assurance. Another possibility would be to require limited assurance, but expand the assurance requirement to a broader scope of registrants including non-accelerated filers and smaller reporting companies. However, these possibilities have the disadvantage of lack of consistency, which could lead to confusion among investors.

12. In lieu of requiring assurance, require disclosure about any assurance obtained over GHG emissions disclosures

Another alternative would be to require all registrants to disclose what type of assurance they are receiving, if any, in lieu of requiring assurance. This would potentially allow affected registrants to avoid the costs of obtaining limited assurance and/or reasonable assurance.[1002] Additionally, registrants would have the flexibility to choose any level of assurance (*i.e.,* none, limited, or reasonable assurance) but still be required to disclose their choice for transparency. This alternative, however, may reduce the reliability and comparability of these disclosures

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[1001] *See* C. H. Cho, G. Michelon, D. M. Patten, and R. W. Roberts, *CSR report assurance in the USA: an empirical investigation of determinants and effects*, 5 (2) SUSTAINABILITY ACCOUNTING, MANAGEMENT AND POLICY JOURNAL 130, 130-148 (2014), *available at* https://doi.org/10.1108/SAMPJ-01-2014-0003.

[1002] *See* Section IV.C.2.(3) for cost estimates of assurance over emissions disclosures.

relative to the standardized assurance requirements within the proposed rules. In addition, as it does not set any minimum requirements for the assurance, this alternative would not address the fragmentation and selective disclosure issues that characterize the current, voluntary reporting regime.

13. Permit host country disclosure frameworks

Another alternative would be to permit alternative compliance using host country disclosure frameworks that the Commission deems suitable. Such an alternative would be beneficial for registrants that already comply with another country's disclosure requirements since they could avoid incurring additional costs to comply with the Commission's rules. This flexibility, however, may fail to address or may even exacerbate growing concerns from investors that climate-related disclosures lack comparability and consistency. While it might be individually optimal for a given firm to use their existing host country disclosure frameworks, the potential lack of consistency and comparability of the disclosure between these firms and other registrant might impose costs on investors. Investors might not able to compare across firms using different disclosure presentations, or may have to incur additional costs in order to do so.

14. Alternative tagging requirements

With respect to Inline XBRL tagging, one alternative is to change the scope of disclosures required to be tagged. We could, for example, remove the tagging requirements for climate-related disclosures for all or a subset of registrants (such as smaller reporting companies). As another example, we could require only a subset of proposed climate-related disclosures, such as the quantitative climate-related metrics, to be tagged in Inline XBRL. Narrowing the scope of climate-related disclosures to be tagged could provide some incremental cost savings for registrants compared to the proposal, because incrementally less time would be required to select and review the particular tags to apply to the climate-related disclosures.

We expect this incremental cost savings to be low because all affected registrants are or in the near future will be required to tag certain of their disclosures (including both quantitative and qualitative disclosures) in Inline XBRL.[1003] Moreover, narrowing the scope of tagging requirements would diminish the extent of informational benefits that would accrue to investors by reducing the volume of climate-related information that would become less costly to process and easier to compare across time and registrants. For example, an alternative whereby only quantitative climate-related disclosures would be tagged would inhibit investors from efficiently extracting/searching climate-related disclosures about registrants' governance; strategy, business model, and outlook; risk management; and targets and goals, thus creating the need to manually run searches for these disclosures through entire documents.[1004] Such an alternative would also inhibit the automatic comparison/redlining of these disclosures against prior periods, and the performance of targeted artificial intelligence or machine learning assessments (tonality, sentiment, risk words, etc.) of specific narrative climate-related disclosures outside the financial statements rather than the entire unstructured document.

[1003] Inline XBRL requirements for business development companies will take effect beginning Aug. 1, 2022 (for seasoned issuers) and Feb. 1, 2023 (for all other issuers). If the proposed Inline XBRL requirements are adopted in the interim, they will not apply to business development companies prior to the aforementioned effectiveness dates. *See supra* note 706.

[1004] To illustrate, using a search string such as "climate change" or "greenhouse gas" to search through the text of all filings from a particular filer population so as to determine the trends in narrative climate-related disclosure among that population over time, could return many narrative disclosures outside of the climate-related disclosures. Examples of this would be a description of pending environmental litigation, existing government regulations and agency names, and broader regulatory risk factors.

G. Request for Comment

We request comment on all aspects of our economic analysis, including the potential costs and benefits of the proposed rules and alternatives thereto, and whether the proposed rules, if adopted, would promote efficiency, competition, and capital formation or have an impact on investor protection. In addition, we also seek comment on alternative approaches to the proposed rules and the associated costs and benefits of these approaches. Commenters are requested to provide empirical data, estimation methodologies, and other factual support for their views, in particular, on costs and benefits estimates. Specifically, we seek comment with respect to the following questions:

- Are there any costs and benefits to any entity that are not identified or misidentified in the above analysis?
- Are there any effects on efficiency, competition, and capital formation that are not identified or misidentified in the above analysis?
- Are there any other alternative approaches to improving climate-related disclosure that we should consider? If so, what are they and what would be the associated costs or benefits of these alternative approaches? For example, what would be the costs and benefits of implementing a new, comprehensive system, for reporting and transferring GHG emissions across corporate supply and distribution chains, as described by Kaplan and Ramanna (2021)?[1005]
- Are there any sources of data that could provide a more precise estimation of the potential compliance costs that registrants may incur if the proposed rules are adopted?

[1005] *See* R. Kaplan and K. Ramanna, How to Fix ESG Reporting (2021), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3900146.

- Have we accurately estimated the costs of disclosing Scope 1 and 2 emissions? If not, please provide alternative estimates of these costs.
- Have we accurately estimated the costs of disclosing Scope 3? If not, please provide alternative estimates of these costs.
- Are there any additional sources of information to estimate the costs of complying with the Scopes 1, 2, and 3 GHG emissions disclosure requirements and the costs of obtaining limited and reasonable assurance for these disclosures?
- Would any data sources allow these compliance cost estimates to be apportioned to separate provisions of the proposed rules? Furthermore, how would these cost estimates vary across time horizons? For example, the first year of implementation may come with higher start-up costs while subsequent years may come with lower costs.
- Have we accurately characterized the cost of limited assurance and reasonable assurance over Scopes 1 and 2 emissions? If not, please provide an estimate of these costs. Similarly, is there data that can show how the costs of limited assurance and reasonable assurance differ for large accelerated, accelerated and non-accelerated filers?
- How are the costs of obtaining limited assurance and reasonable assurance likely to change over time (*e.g.,* over the five years following adoption or compliance with a specified level of assurance)? What would be the costs and benefits of providing a longer transition period for obtaining assurance over Scopes 1 and 2 emissions disclosures?

V. PAPERWORK REDUCTION ACT

A. Summary of the Collections of Information

Certain provisions of our rules and forms that would be affected by the proposed amendments contain "collection of information" requirements within the meaning of the

Paperwork Reduction Act of 1995 ("PRA").[1006] The Commission is submitting the proposal to the Office of Management and Budget ("OMB") for review in accordance with the PRA.[1007] The hours and costs associated with preparing and filing the forms and reports constitute reporting and cost burdens imposed by each collection of information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information requirement unless it displays a currently valid OMB control number. Compliance with the information collections is mandatory. Responses to the information collections are not kept confidential and there is no mandatory retention period for the information disclosed. The titles for the affected collections of information are:

- Form S-1 (OMB Control No. 3235-0065);
- Form F-1 (OMB Control No. 3235-0258);
- Form S-4 (OMB Control No. 3235-0324);
- Form F-4 (OMB Control No. 3235-0325);
- Form S-11 (OMB Control No. 3235-0067);
- Form 10 (OMB Control No. 3235-0064);
- Form 10-K (OMB Control No. 3235-0063);
- Form 10-Q (OMB Control No. 3235-0070);
- Form 20-F (OMB Control No. 3235-0288); and

[1006] *See* 44 U.S.C. 3501 et seq.

[1007] 44 U.S.C. 3507(d) and 5 CFR 1320.11.

- Form 6-K (OMB Control No. 3235-0116).[1008]

The proposed amendments would require U.S. registrants filing Securities Act registration statements on Forms S-1, S-4, and S-11 to include the climate-related disclosures required under proposed subpart 1500 of Regulation S-K and proposed Article 14 of Regulation S-X. The proposed amendments would also require foreign private issuers to include the proposed climate-related disclosures when filing Securities Act registration statements on Forms F-1 and F-4. The proposed amendments would further require U.S. registrants and foreign private issuers to include the proposed climate-related disclosures in their Exchange Act annual reports filed, respectively, on Forms 10-K and 20-F and in Exchange Act registration statements filed, respectively, on Forms 10 and 20-F. Registrants would be required to include the climate-related information required under proposed subpart 1500 in a part of the registration statement or annual report that is separately captioned as *Climate-Related Disclosure*. Registrants would be required to include the climate information required under Article 14 in a note to the financial statements, which would be subject to audit. Further, as described below, accelerated filers and large accelerated filers would be required to include an attestation report covering their Scopes 1 and 2 emissions disclosure, subject to phase-ins. In addition, U.S. registrants and foreign private issuers would be required to report material changes to the climate information disclosed in their Exchange Act reports on, respectively, Forms 10-Q and 6-K. A description of the proposed amendments, including the need for the climate information and its proposed use, as well as a

[1008] The proposed amendments would also indirectly affect Forms S-3 and F-3. Registrants filing Forms S-3 and F-3 are able to incorporate by reference their annual reports filed on Forms 10-K or 20-F. Because the proposed amendments would affect Forms 10-K and 20-F, and are not expected to affect Forms S-3 and F-3 except when Forms 10-K and 20-F are incorporated by reference into those Securities Act forms, we are not separately accounting for the PRA burden related to Forms S-3 and F-3.

description of the likely respondents, can be found in Section II above, and a discussion of the economic effects of the proposed amendments can be found in Section IV above.

B. Summary of the Proposed Amendments' Effects on the Collections of Information

Our estimates of the paperwork burden associated with the proposed amendments are based primarily on climate-related reporting cost estimates from six sources: a comment letter from the Society for Corporate Governance ("Society") that provided some hour and cost estimates for climate reporting by large-cap companies;[1009] a report by the Climate Risk Disclosure Lab at Duke University School of Law's Global Financial Markets Center that presents survey results of climate-related disclosure costs for three unnamed companies;[1010] an impact assessment conducted by the United Kingdom's Department for Business, Energy, and Industrial Strategy for a rule that, similar to the Commission's proposed rules, would require TCFD-aligned disclosures from all listed firms;[1011] two cost estimates from a data analytics firm–one that covered primarily risk assessment and analysis pursuant to the TCFD framework,

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1009 *See* letter from Society for Corporate Governance.

1010 *See* Climate Risk Disclosure Lab *The Cost of Climate Disclosure: Three Case Studies on the Cost of Voluntary Climate-Related Disclosure* (Dec. 2021), *available at* https://climatedisclosurelab.duke.edu/wp-content/uploads/2021/12/The-Cost-of-Climate-Disclosure.pdf.

1011 *See* UK Department for Business, Energy, and Industrial Strategy, Final Stage Impact Assessment (Oct. 1, 2021), available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1029317/climate-related-financial-disclosure-consultation-final-stage-impact-assessment.pdf; *see also* UK Department for Business, Energy, and Industrial Strategy, Initial Impact Assessment (Jan. 29, 2021), available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/972423/impact-assessment.pdf . The scope of the impact assessment included companies listed on the London Stock Exchange with over 500 employees, UK registered companies admitted to AIM with over 500 employees, and certain other companies.

and the other for calculating GHG emissions;[1012] and cost estimates for GHG emissions measurement and reporting from two climate management firms.[1013]

In response to Acting Chair Lee's request for public input about climate disclosures,[1014] Society submitted the results of a survey it had conducted on a small number of public large-cap companies about the costs of their current climate reporting. According to this commenter, two companies estimated that the number of employee hours spent on climate reporting ranged from 7,500 to 10,000 annually, while a third company estimated the number of annual employee hours spent on climate reporting to be 2,940 hours.[1015] The average annual employee hours spent on climate reporting for these large-cap companies was 6,813 hours.[1016]

The Climate Risk Disclosure Lab's report presents the results of its survey of one European large-cap financial institution, one US large-cap industrial manufacturing company, and one US mid-cap waste management company about their climate-related disclosure costs.[1017] The European financial institution reported annual climate-related disclosure costs ranging from $250,000 to $500,000, which averages to $375,000 annually.[1018] For PRA purposes, we have

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[1012] *See* memorandum, dated Feb. 4, 2022, concerning staff meeting with representatives of S&P Global. This and the other staff memoranda referenced below are available at https://www-draft.sec.gov/comments/s7-10-22/s71022.htm.

[1013] *See* memorandum, dated Nov. 30, 2021, concerning staff meeting with representatives of Persefoni; and memorandum, dated Jan. 14, 2022, concerning staff meeting with representatives of South Pole.

[1014] *See supra* Section I.B.

[1015] *See* letter from Society for Corporate Governance. This commenter also stated that fees for external climate advisory services ranged from $50,000 to $1.35 million annually.

[1016] 7,500 hrs.+ 10,000 hrs. +2,940 hrs. = 20,440 hrs.; 20,440/3 = 6,813 hrs.

[1017] *See supra* Section IV.C.2 for a more detailed discussion of these reported costs.

[1018] $250,000 + $500,000 = $750,000. $750,000/2 = $375,000.

converted this dollar cost average to 6,818 burden hours using a metric of $55/hour.[1019] The US industrial manufacturing company disclosed annual climate-related disclosure costs for its employees and one full-time consultant ranging from $200,000 to $350,000, which averages to $275,000 annually. We have similarly converted this dollar cost average to 5,000 burden hours.[1020] The US waste management company reported that its employees spent 82 hours annually to produce its climate-related disclosures. The average annual internal burden hours spent on climate reporting for these three companies comes to 3,967 hours.[1021]

The UK Impact Assessment estimated on an ongoing, annual basis the number of hours and costs that it would take in-house personnel[1022] to gather data and prepare and provide disclosure for each of the following TCFD-aligned topics: governance, strategy, risk management, and metrics and targets.[1023] The impact assessment also estimated on an annual, ongoing basis the number of hours and costs that it would take a parent company's personnel to collect and process climate-related data from its subsidiaries.[1024] The impact assessment further

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[1019] This metric is based on a reported national annual average salary for a climate specialist of $114,463. *See* glassdoor, *How much does a Climate Change Specialist make?* (Dec. 2021), available at https://www.glassdoor.com/Salaries/climate-change-specialist-salary-SRCH_KO0,25.htm. $114,463/2080 hrs. = $55/hr. $375,000/$55/hr. = 6,818 hrs. (rounded to nearest dollar).

[1020] $200,000 + $350,000 = $550,000. $550,000/2 = $275,000. $275,000/$55/hr. = 5,000 hrs.

[1021] 6,818 hrs. + 5,000 hrs. + 82 hrs. = 11,900 hrs.; 11,900 hrs./3 = 3,967 hrs.

[1022] Unlike this PRA analysis, which assumes that some of the paperwork burden will be borne by in-house personnel and some by outside professionals, the UK Impact Assessment assumed that all of the work would be done by in-house personnel.

[1023] The UK Impact Assessment's estimated number of hours for each TCFD-aligned disclosure topic per company was: 225 hrs. for governance; 295 hrs. for strategy; 245 hrs. for risk management; and (in Year 1) 2,227 hrs. for metrics and targets, which included one in-house climate-related expert working full-time.

[1024] This estimate was 85 hrs.

estimated on a one-time basis the number of hours and costs that it would take in-house personnel to become familiar with and review the new climate-related reporting requirements and related guidance.[1025] The total number of hours that the Impact Assessment estimated it would take a company to comply with the TCFD-aligned disclosure requirements in the first year came to 3,447 hours, of which 977.5 hours pertained to qualitative, TCFD-aligned disclosure and 2,469.5 hours pertained to GHG emissions metrics and targets disclosure.[1026]

We also have considered cost estimates from S&P Global, a data analytics firm that provides ESG consulting services, including climate-related data collection and analysis, among other services. This firm provided one cost estimate for preparing TCFD-aligned disclosures primarily covering physical risk and transition risk assessment and analysis, which, for a company lacking any experience in climate reporting, ranged from $150,000 to $200,000 (an average of $175,000) in the first year of reporting.[1027] For a company with prior experience in GHG emissions reporting but requiring assistance with TCFD-aligned reporting, the firm

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[1025] The primary difference between the Initial Impact Assessment and Final Impact Assessment concerned the estimated "familiarization" costs. The Final Impact Assessment assumed that the rule would require scenario analysis and added additional hours for in-house personnel to become familiar with scenario analysis methodology. Because our proposed rules do not require scenario analysis, we are using the familiarization estimate of the Initial Impact Assessment (323 hrs.) when totaling the estimated hours required to comply with the UK's proposed climate disclosure rules. We have added to the familiarization estimate the number of hours (77 hrs.) that the Final Impact Assessment estimated for the one-time legal review of the new climate disclosure requirements by in-house personnel.

[1026] 400 hrs. (familiarization and review) + 195 hrs. (governance) + 295 hrs. (strategy) + 245 hrs. (risk management) + 2,227 hrs. (metrics and targets) + 85 hrs. (parent co. processing) = 3,447 hrs. For purposes of the PRA, we have allocated approximately half of the hours pertaining to familiarization and review and parent company processing between the qualitative TCFD-aligned disclosure and the GHG emissions metrics and targets disclosure. This results in 977.5 hrs. allocated to the qualitative TCFD-aligned disclosure and 2,469.5 hrs. allocated to the GHG emissions metrics and targets disclosure.

[1027] *See* memorandum concerning staff meeting with representatives of S&P Global. $150,000 + $200,000 = $350,000; $350,000/2 = $175,000.

estimated average costs of $100,000.[1028] This results in an average cost estimate for all companies for TCFD-aligned disclosures, excluding GHG emissions calculation and reporting, of $137,500 in the first year of TCFD-aligned reporting.[1029] For PRA purposes, we have converted this dollar cost average to 2,500 burden hours.[1030]

This data analytics firm provided a separate cost estimate for calculating a company's Scopes 1, 2, and 3 emissions.[1031] For the initial calculation of a company's GHG emissions, including all three scopes, the cost estimate ranged from $75,000 to $125,000 (an average of $100,000).[1032] The firm also estimated that the setting and reporting of GHG emissions targets would on average add an additional $25,000, resulting in an average first-year cost estimate for GHG emissions metrics and targets of $125,000.[1033] For PRA purposes, we have converted this dollar cost average to 2,273 burden hours.[1034] This results in a total incremental burden increase

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[1028] *See id*.

[1029] $175,000 + $100,000 = $275,000; $275,000/2 = $137,500.

[1030] $137,500/$55/hr. = 2,500 hrs.

[1031] *See* memorandum concerning staff meeting with representatives of S&P Global. Although the proposed rules would require the disclosure of a registrant's Scope 3 emissions only if they are material, this cost estimate is relevant for determining the upper bound of the proposed rules' estimated PRA burden.

[1032] $75,000 + $125,000 = $200,000; $200,000/2 = $100,000.

[1033] Although the proposed rules would not require a registrant to set GHG emissions targets, they would require certain disclosures if the registrant does set targets. We have therefore included S&P Global's cost estimate for targets for purposes of determining the upper bound of the proposed rules' estimated PRA burden. However, because setting targets would be voluntary under the proposed rules, the estimated PRA burden may overstate the potential burden.

[1034] $125,000/$55/hr. = 2,273 hrs.

(for both TCFD-aligned disclosures and GHG emissions calculation) in the first year of climate-related reporting of 4,773 burden hours.[1035]

We also considered the cost estimates for GHG emissions measurement and reporting provided by two climate management firms, Persefoni and South Pole. Persefoni estimated that, depending on the maturity of a company's emissions reporting program, a company's average first-year costs for measuring and reporting Scopes 1, 2, and 3 emissions ranged from $50,000 to $125,000, which averages to $87,500, or 1,591 hours.[1036] South Pole estimated annual costs for measuring and reporting Scopes 1, 2 and 3 emissions as ranging from $11,800 to $118,300, which averages to $65,050, or 1,183 hours.[1037]

The UK Impact Assessment estimated that the calculation and reporting of GHG emissions metrics and related targets would take the greatest amount of time, constituting approximately 72 percent of the total incremental burden.[1038] The data analytics firm, however, estimated that GHG emissions metrics and targets would constitute approximately 48 percent of the total incremental burden.[1039] The burden estimates provided by the above-referenced commenter and Climate Lab did not allocate between GHG emissions and non-GHG emissions climate reporting. For purposes of the PRA, we have allocated the burden estimates from the

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[1035] 2,500 hrs. + 2,273 hrs. = 4,773 hrs.

[1036] *See* memorandum concerning staff meeting with representatives of Persefoni. $50,000 + $125,000 = $175,000; $175,000/2 = $87,500; $87,500/$55/hr. = 1,591 hrs.

[1037] *See* memorandum concerning staff meeting with representatives of South Pole. $11,800 + $118,300 = $130,100; $130,100/2 = $65,050; $65,050/$55/hr. = 1,183 hrs.

[1038] *See supra* note 1026 (2,469.5 hrs./3,447 hrs. = 72 percent).

[1039] *See supra* note 1035 (2,273 hrs./4,773 hrs. = 48 percent).

commenter and Climate Lab equally between the qualitative TCFD-aligned disclosure and the GHG emissions metrics and targets disclosure.[1040]

Based on the above sources, we estimate that the proposed qualitative TCFD-aligned disclosures would result in an average incremental burden hour increase of 2,217 hrs. for each affected collection of information for the first year of climate reporting.[1041] We estimate that the proposed GHG emissions metrics and targets disclosure would result in an average incremental burden hour increase of 2,151 hours for each affected collection of information for the first year of reporting.[1042]

In addition to GHG emissions metrics, the proposed rules would require the disclosure of certain climate-related financial statement metrics. Although the TCFD recommends the disclosure of metrics pertaining to the financial impacts of climate-related events and conditions, it is unclear whether the above sources' burden estimates for TCFD-aligned disclosure would include financial statement metrics. Based on staff experience reviewing financial statements, we estimate that preparation of the financial statements to present the proposed financial statement metrics would require 70 additional burden hours per filing. To ensure that our PRA estimates cover the burden associated with the proposed climate-related financial statement

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1040 For the Society for Corporate Governance-derived estimate, this results in 3,406.5 hrs. for each of the qualitative TCFD-aligned disclosure and the GHG emissions metrics and targets disclosure. For the Climate Lab-derived burden estimate, this results in 1,983.5 burden hrs. for each of the qualitative and quantitative disclosures.

1041 3,406.5 hrs. (Society) + 1,983.5 hrs. (Climate Lab) + 977.5 hrs. (UK) +2,500 hrs. (S&P Global) = 8,867.5 hrs.; 8,867.5/4 = 2,217 hrs. (rounded to the nearest whole number).

1042 3,406.5 hrs. (Society) + 1,983.5 hrs. (Climate Lab) + 2,469.5 hrs. (UK) + 2,273 hrs. (S&P Global) + 1,591 hrs. (Persefoni) + 1,183 hrs. (South Pole) = 12,906.5 hrs.; 12,906.5 hrs./6 = 2,151 hrs.

metrics, we have included this amount, in addition to the burden estimate for GHG emissions metrics and targets, in the estimated overall PRA burden of the proposed rules.

The proposed rules would require a registrant to present the climate-related financial statement metrics and associated disclosures in a note to its financial statements, which would be audited. Because the audit of such information would be part of the registrant's overall audit of its financial statements, we expect the incremental audit costs associated with these climate-related financial statement metrics and disclosures to be modest.[1043] We are conservatively estimating that auditing the note pertaining to the climate-related financial statement metrics and associated disclosures would add audit fees of $15,000 to the overall costs associated with the audit of the registrant's financial statements. We derived this estimate by first estimating costs as an average percentage of total audit fees (1.5%)[1044] and then applying that percentage to

[1043] This belief is based on post-implementation review observations and activities from accounting standards that provided further disaggregation of information and that are analogous to the proposed financial statement metrics requirements, as discussed *supra* Section II.F.2.a (*e.g.,* segment reporting and disaggregation of revenue). *See* FASB's post-implementation review report on FASB Statement No. 131, Disclosures about Segments of an Enterprise and Related Information (Dec. 2012), 11, ("Preparers' incremental costs to implement and comply with Statement 131 generally were not significant and were in line with expectations"), *available at* https://www.accountingfoundation.org/cs/Satellite?c=Document_C&cid=1176160621900&pagename=Foundation%2FDocument_C%2FDocumentPage. *See also* FASB's Board Meeting Handout, post-implementation review of Topic 606, Revenue with Contracts with Customers Our (July 28, 2021) (While the post-implementation review is still ongoing, most users agreed that the disaggregated [revenue] disclosure is helpful (par. 16) and users noted that although they incurred costs to become familiar with the new standard, update models, or maintain dual models during the transition period, most of those costs were nonrecurring. For users that are generalists or that cover sectors that did not have significant changes to revenue recognition measurement or timing under Topic 606, the costs were not significant. (par. 20), *available at* https://www.fasb.org/cs/ContentServer?c=Document_C&cid=1176176976563&d=&pagename=FASB%2FDocument_C%2FDocumentPage.

[1044] The staff estimated a range of 0.5% to 2.5%, which averages to 1.5%.

median audit fees of $690,000,[1045] which results in $10,350. To be conservative, we have increased this amount to $15,000 for estimated audit fees. We believe that this estimate represents the average cost of the incremental efforts that may be incurred, taking into consideration factors such as the scale and complexity of different registrants and the extent of impact by climate-related events (*e.g.,* location of operations, nature of business). This cost also takes into consideration the need to understand and evaluate the registrants' processes and internal controls associated with the reporting of the climate-related financial statement metrics and associated disclosures.

The proposed rules would require a registrant that is a large accelerated filer[1046] or an accelerated filer[1047] to include, in the relevant filing, an attestation report covering the disclosure of its Scope 1 and Scope 2 emissions and to provide certain related disclosures. Following a one-year phase-in period in which no attestation report would be required, for filings made for the second and third fiscal years following the compliance date for the GHG emissions disclosure requirement, large accelerated filers would be required to obtain an attestation report for their Scopes 1 and 2 emissions disclosure, at minimum, at a limited assurance level. We estimate the cost of a limited assurance attestation report covering a large accelerated filer's

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[1045] This is based on staff review of Audit Analytics data for 2020.

[1046] Based on staff review of filings made in 2020, large accelerated filers filed approximately 31% of domestic forms and approximately 37% of Form 20-Fs in 2020. For PRA purposes, we have used 37% as a proxy for the percentage of all foreign private issuer forms filed by large accelerated filers in 2020.

[1047] Based on staff review of filings made in 2020, accelerated filers filed approximately 11% of domestic forms and 15% of Form 20-Fs in 2020.

Scopes 1 and 2 emissions to be $110,000.[1048] Commencing with the fourth fiscal year following the compliance date and thereafter, a large accelerated filer would be required to obtain an attestation report covering its Scopes 1 and 2 emissions disclosure at a reasonable assurance level. We estimate the cost for such a reasonable assurance attestation report to be $175,000.[1049] This results in an initial six-year average[1050] assurance cost for a large accelerated filer's Scopes 1 and 2 emissions of $124,167.[1051]

Following a one-year phase-in period in which no attestation report would be required, for filings made for the second and third fiscal years following the compliance date for the GHG emissions disclosure requirement, accelerated filers would be required to obtain an attestation report for their Scopes 1 and 2 emissions disclosure, at minimum, at a limited assurance level. We estimate the cost of a limited assurance attestation report covering an accelerated filer's Scopes 1 and 2 emissions to be $45,000.[1052] Commencing with the fourth fiscal year following the compliance date and thereafter, an accelerated filer would be required to obtain an attestation report covering its Scopes 1 and 2 emissions disclosure at a reasonable assurance level. We estimate the cost for such a reasonable assurance attestation report to be $75,000.[1053] This

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[1048] *See supra* Section IV.C.2.a.3. for the basis of this limited assurance cost estimate.

[1049] *See id*.

[1050] In order to capture three years of the cost of a reasonable assurance attestation report required for accelerated filers and large accelerated filers, which requirement does not commence until the fourth fiscal year following the proposed rules' compliance date, we have used a six-year average when calculating the estimated paperwork burden effects of the proposed rules.

[1051] 0 + $110,000 + $110,000 + $175,000 + $175,000 + $175,000 = $745,000; $745,000/6 = $124,167.

[1052] *See supra* Section IV.C.2.a.3. for the basis of this limited assurance cost estimate.

[1053] *See id*.

results in an initial six-year average assurance cost for an accelerated filer's Scopes 1 and 2 emissions of $52,500.[1054]

The proposed rules would require a registrant that is not required to include a GHG emissions attestation report to state whether any of the registrant's GHG emissions disclosures were subject to third-party attestation or verification. If so, the registrant would be required to identify the provider of assurance or verification and disclose certain additional information, such as the level and scope of assurance or verification provided, among other matters.[1055] The burden and costs for this disclosure are encompassed within the estimated overall internal burden and costs for the proposed GHG emissions disclosure.

The UK Impact Assessment assumed a 25 percent reduction in hour and cost estimates for the work required to comply with the GHG emissions metrics and targets disclosure requirement in Year 2 compared to Year 1 because initial implementation of the metrics and targets framework would not need to be repeated. We believe this assumption is reasonable and have made a similar reduction after the first year of compliance when calculating the four-year average for the estimated paperwork burden hour effect of the proposed rules. We also have assumed a 10 percent reduction in the hour and cost estimates for preparing and providing the disclosures for the other TCFD-aligned topics in Years 2 through 6 compared to Year 1. We believe that this assumption is reasonable because the burden hours and costs associated with becoming familiar with the other TCFD disclosure topics would not need to be repeated.[1056] We believe that the reduction in the compliance burden and costs for the metrics and targets

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[1054] 0 + $45,000 + $45,000 + $75,000 + $75,000 + $75,000 = $315,000; $315,000/6 = $52,500.

[1055] *See* proposed 17 CFR 229.1505(e).

[1056] S&P Global estimated a similar reduction in costs in subsequent years, the magnitude of which depends on the extent of material changes to the TCFD-aligned disclosure and the GHG emissions metrics.

disclosure requirement would be greater than the reduction for the other TCFD-aligned disclosure topics because the initial work to implement a climate data collection and reporting framework to comply with the metrics and targets requirement would be greater than the initial framework required for the other disclosure requirements.

SRCs, which comprise 50 percent of domestic filers, and 45 percent of total affected registrants,[1057] would bear a lesser compliance burden because those registrants would not be subject to the proposed disclosure requirement pertaining to Scope 3 emissions, which, of the three types of GHG emissions, poses the greatest challenge to calculate and report. We accordingly estimate that the increase in the PRA burden pertaining to the GHG emissions requirement for SRCs filing on domestic forms would be approximately 50% less than the increased burden for the GHG emissions requirement for non-SRC registrants.[1058] Smaller foreign private issuers that file on the foreign private issuer forms would not be eligible for this adjustment because those foreign private issuers are excluded from the definition of, and therefore cannot be, SRCs.[1059]

[1057] In 2020, there were 6,220 domestic filers + 740 foreign private issuer (fpi) filers = 6,960 affected filers. 3,110 domestic filers + 740 fpi filers = 3,850 non-SRC filers. 3,850/6,960 = 55%. 3,110 filers were SRCs in 2020. 3,110/6,960 = 45%. *See supra* Section IV.B.

[1058] This is generally consistent with some of the cost estimates obtained for calculating and reporting Scopes 1, 2, and 3 emissions. For example, Persefoni indicated that the annual GHG emissions costs for a company having experience calculating and reporting GHG emissions would double if it included Scope 3 emissions after calculating Scopes 1 and 2 emissions. *See supra* note 1013. In addition, S&P Global indicated that a company's annual ongoing reporting costs of Scopes 1 and 2 emissions would, at a minimum, increase from $40,000 to $75,000 if it included Scope 3 emissions. *See supra* note 1012.

[1059] *See, e.g.*, Instruction 2 to the definition of smaller reporting company under 17 CFR 230.405.

In addition to requiring the annual climate disclosures, the proposed rules would require a registrant to disclose any material change to its climate-related disclosures reported in its annual Exchange Act annual report (Form 10-K or 20-F) on a Form 10-Q (if a domestic filer) or a Form 6-K (if a foreign private issuer filer). We would not expect a registrant to report such a material change until its second year of compliance, at the earliest. Based on the staff's assessment of the amount of time it would take to determine that there has been a material change in the previously reported climate disclosure, particularly concerning its GHG emissions metrics, and to prepare disclosures regarding the material change, if any, we estimate a burden hour increase of 40 hours per form, or an initial six-year average of 33 hours per form.[1060]

The following table summarizes the estimated paperwork burden effects of the proposed amendments for non-SRC and SRC registrants associated with the affected collections of information.

PRA Table 1. Estimated Paperwork Burden Effects of the Proposed Amendments for Non-SRC and SRC Registrants[1]

[1060] 0 + (40 hrs. x 5) = 200 hrs.; 200 hrs./6 = 33 hrs. (rounded to nearest whole number).

Collections of Information	Proposed Disclosure Item	Estimated PRA Burden Hour Effect for Non-SRC Registrants (Year 1)	Estimated PRA Burden Hour Effect for SRC Registrants (Year 1)	Estimated PRA Burden Hour Effect for Non-SRC Registrants (For each Year 2 through 6)	Estimated PRA Burden Hour Effect for SRC Registrants (For each Year 2 through 6)	Estimated PRA Burden Hour Effect for Non-SRC Registrants (6 Year Average)	Estimated PRA Burden Hour Effect for SRC Registrants (6 Year Average)	Estimated Average Annual Assurance Costs for Climate-related Financial Statement Metrics (6 Year Average)	Estimated Average Annual Assurance Costs for Scopes 1 and 2 Emissions Disclosure by AFs[2] (6 Year Average)	Estimated Average Annual Assurance Costs for Scopes 1 and 2 Emissions Disclosure by LAFs[3] (6 Year Average)
Forms S-1, S-4, S-11, 10, and 10-K	Climate-related disclosures regarding governance, strategy, and risk management	+2,217 hrs.	+2,217 hrs.	+1,995 hrs.	+1,995 hrs.	+2,032 hrs.	+2,032 hrs.	+$15,000	+$52,500	$124,167
	Financial statement metrics	+70 hrs.	+70 hrs.	+63 hrs.	+63 hrs.	+64 hrs.	+64 hrs.			
	GHG emissions metrics and targets	+2,151 hrs.	+1,076 hrs.	+1,613 hrs.	+807 hrs.	+1,703 hrs.	+852 hrs.			
Total		+4,438 hrs.	+3,363 hrs.	+3,671 hrs.	+2,865 hrs.	+3,799 hrs.	+2,948 hrs.	+$15,000	+$52,500	$124,167
Forms F-1, F-4, and 20-F	Climate-related disclosures regarding governance, strategy, and risk management	+2,217 hrs. +70 hrs.	NA	+1,995 hrs.	NA	+2,032 hrs.	NA	+$15,000	+$52,500	$124,167

	Financial statement metrics GHG emissions metrics and targets	+2,151 hrs.		+63 hrs. +1,613 hrs.	.	+64 hrs. +1,703 hrs.				
Total		+4,438 hrs.		+3,671 hrs.		+3,799 hrs.		+$15,000	+$52,500	$124,167
Forms 10-Q and 6-K	Material change to 10-K/20-F	0		+40 hrs.		+33 hrs.		0	0	0

[1] All numbers rounded to nearest whole number.
[2] Accelerated Filers
[3] Large Accelerated Filers

C. Incremental and Aggregate Burden and Cost Estimates for the Proposed Amendments

Below we estimate the incremental and aggregate increase in paperwork burden resulting from the proposed amendments. These estimates represent the average burden for all issuers, both large and small. In deriving our estimates, we recognize that the burdens will likely vary among individual registrants based on a number of factors, including the nature of their business, the size and complexity of their operations, and whether they are subject to similar climate-related disclosure requirements in other jurisdictions or already preparing similar disclosures on a voluntary basis. For purposes of the PRA, the burden is to be allocated between internal burden hours and outside professional costs. The table below sets forth the percentage estimates we typically use for the burden allocation for each affected collection of information. We also estimate that the average cost of retaining outside professionals is $400 per hour.[1061]

PRA Table 2. Standard Estimated Burden Allocation for Specified Collections of Information

Collection of Information	Internal	Outside Professionals
Forms S-1, F-1, S-4, F-4, S-11, 10, and 20-F	25%	75%
Forms 10-K, 10-Q, and 6-K	75%	25%

We estimate that the proposed amendments would change the burden per response, but not the frequency, of the existing collections of information. The burden increase estimates for

[1061] We recognize that the costs of retaining outside professionals may vary depending on the nature of the professional services, but for purposes of this PRA analysis, we estimate that such costs would be an average of $400 per hour.

each collection of information were calculated by multiplying the number of responses by the increased estimated average amount of time it would take to prepare and review the disclosure required under the affected collection of information (using the estimated three-year average increase). Since 50 percent of the domestic filers in 2020 were non-SRCs and 50 percent were SRCs, we assume for purposes of our PRA estimates that 50 percent of each domestic collection of information was filed by non-SRCs and 50 percent by SRCs. The table below illustrates the incremental change to the annual compliance burden of the affected collections of information, in hours and costs.

PRA Table 3. Calculation of the Incremental Change in Burden Estimates of Current Responses Resulting from the Proposed Amendments[1]

Collection of Information	Filed By	Number of Estimated Affected Respondents (A)	Burden Hour Annual Increase per Affected Respondent (B)	Increase in Burden Hours for Affected Respondents (C) = (A) x (B)	Increase in Internal Burden Hours for Affected Respondents (D) = (C) x 0.25 or 0.75	Increase in Professional Hours for Affected Respondents (E) = (C) x 0.75 or 0.25	Climate-Related Financial Statement Metrics Assurance Costs for Affected Respondents[2] (F) = (A) x $15,000	GHG Emissions Assurance Costs for AFs[3] (G) = (A) x 0.11 or 0.15 x $52,500	GHG Emissions Assurance Costs for LAFs[4] (H) = (A) x 0.31 or 0.37 x $124,167	Increase in Professional Costs for Affected Respondents (I) = (E) x $400 + (F) + (G) + (H)
S-1	Non-SRCs	447	3,799	1,698,153						
S-1	SRCs	447	2,948	1,317,756						
S-1 (Total)		894		3,015,909	753,977	2,261,932	$13,410,000	$5,145,000	$34,394,259	$957,722,059
S-4	Non-SRCs	294	3,799	1,116,906						
S-4	SRCs	294	2,948	866,712						
S-4 (Total)		588		1,983,618	495,905	1,487,714	$8,820,000	$3,412,500	$22,598,394	$629,916,494
S-11	Non-SRCs	34	3,799	129,166						
S-11	SRCs	33	2,948	97,284						
S-11 (Total)		67		226,450	56,613	169,838	$1,005,000	$367,500	$2,607,507	$71,915,207
10	Non-SRCs	108	3,799	410,292						
10	SRCs	108	2,948	318,384						
10 (Total)		216		728,676	182,169	546,507	$3,240,000	$1,260,000	$8,319,189	$231,421,989
10-K	Non-SRCs	4,146	3,799	15,750,654						
10-K	SRCs	4,146	2,948	12,222,408						
10-K (Total)		8,292		27,973,062	20,979,797	6,993,266	$124,380,000	$47,880,000	$319,233,357	$3,288,799,757
10-Q	Non-SRCs	11,463	33	378,279						
10-Q	SRCs	11,462	33	378,246						
10-Q (Total)		22,925		756,525	567,394	189,131	0	0	0	$75,652,400
F-1	Both	66	3,799	250,734	62,684	188,051	$990,000	$525,000	$2,980,008	$79,715,408
F-4	Both	39	3,799	148,161	37,040	111,121	$585,000	$315,000	$1,738,338	$47,086,738

20-F	Both	729	3,799	2,769,471	692,368	2,077,103	$10,935,000	$5,722,500	$33,525,090	$881,023,790
6-K	Both	34,794	33	1,148,202	861,152	287,051	0	0	0	$114,820,400

[1] All numbers rounded to nearest whole number.
[2] We have not assumed assurance costs for Form 10-Q or Form 6-K because these forms typically have only marginal assurance costs. We expect these forms to be filed in the 2nd year, at the earliest.
[3] AFs filed 11% of domestic forms and 15% of foreign private issuer forms in 2020.
[4] LAFs filed 31% of domestic forms and 37% of foreign private issuer forms in 2020.

The table below illustrates the program change expected to result from the proposed rule amendments together with the total requested change in reporting burden and costs.

PRA Table 4. Requested Paperwork Burden under the Proposed Amendments

Collection of Information	Current Burden			Program Change			Requested Change in Burden		
	Current Annual Responses (A)	Current Internal Burden Hours (B)	Current External Cost Burden (C)	No. of Affected Responses (D)	Change in Internal Burden Hours (E)	Change in External Costs (F)	Annual Responses (G)	Internal Burden Hours (H) = (B) + (E)	External Cost Burden (I) = (C) + (F)
S-1	894	146,067	$178,922,043	894	753,977	$957,722,059	894	900,044	$1,134,929,102
S-4	588	562,362	$677,255,579	588	495,905	$629,916,494	588	1,058,267	$1,306,034,573
S-11	67	12,229	$14,943,768	67	56,613	$71,915,207	67	68,842	$86,736,475
10	216	11,855	$14,091,488	216	182,169	$231,421,989	216	194,024	$245,093,477
10-K	8,292	14,188,040	$1,893,793,119	8,292	20,979,797	$3,288,799,757	8,292	35,167,837	$5,166,632,876
10-Q	22,925	3,182,333	$421,490,754	22,925	567,394	$75,652,400	22,925	3,749,727	$497,143,154

F-1	66	26,707	$32,293,375	66	62,684	$79,715,408	66	89,391	$111,833,783
F-4	39	14,049	$17,073,825	39	37,040	$47,086,738	39	51,089	$64,055,563
20-F	729	479,261	$576,824,025	729	692,368	$881,023,790	729	1,171,629	$1,455,940,315
6-K	34,794	227,031	$30,270,780	34,794	861,152	$114,820,400	34,794	1,088,183	$145,091,180
Total		18,849,934	$3,856,958,756		24,689,099	$6,378,073,242		43,539,033	$10,235,031,998

D. Request for Comment

We request comment in order to:

- Evaluate whether the proposed collections of information are necessary for the proper performance of the functions of the agency, including whether the information would have practical utility;
- Evaluate the accuracy of our estimate of the burden of the proposed collections of information, including any assumptions used;
- Determine whether there are ways to enhance the quality, utility, and clarity of the information to be collected;
- Evaluate whether there are ways to minimize the burden of the collections of information on those who are to respond, including through the use of automated collection techniques or other forms of information technology; and
- Evaluate whether the proposed amendments would have any effects on any other collections of information not previously identified in this section.[1062]

Any member of the public may direct to us any comments about the accuracy of these burden estimates and any suggestions for reducing these burdens. Persons submitting comments on the collection of information requirements should direct the comments to the Office of Management and Budget, Attention: Desk Officer for the Securities and Exchange Commission, Office of Information and Regulatory Affairs, Washington, DC 20503, and should send a copy to Vanessa A. Countryman, Secretary, Securities and Exchange Commission, 100 F Street NE, Washington, DC 20549-1090, with reference to File No. S7-10-22. Requests for materials

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[1062] We request comment pursuant to 44 U.S.C. 3506(c)(2)(B).

submitted to OMB by the Commission with regard to these collections of information should be in writing, refer to File No. S7-10-22, and be submitted to the Securities and Exchange Commission, Office of FOIA Services, 100 F Street NE, Washington, DC 20549-2736. OMB is required to make a decision concerning the collection of information between 30 and 60 days after publication of this release. Consequently, a comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication.

VI. INITIAL REGULATORY FLEXIBILITY ACT ANALYSIS

This Initial Regulatory Flexibility Act Analysis ("IRFA") has been prepared, and made available for public comment, in accordance with the Regulatory Flexibility Act ("RFA").[1063] It relates to the proposal to add new subpart 1500 to Regulation S-K and new Article 14 to Regulation S-X, which would require registrants to provide certain climate-related disclosures in their Securities Act and Exchange Act registration statements and Exchange Act reports. As required by the RFA, this IRFA describes the impact of these proposed amendments of Regulations S-K and S-X on small entities.[1064]

A. Reasons for, and Objectives of, the Proposed Action

We are proposing to require registrants to provide certain climate-related information in their registration statements and annual reports, including certain information about climate-related financial risks and climate-related financial metrics in their financial statements. The disclosure of this information would provide consistent, comparable, and decision-useful information to investors to enable them to make informed judgments about the impact of climate-related risks on current and potential investments. Information about climate-related

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[1063] 5 U.S.C. 601 *et seq*.

[1064] 5 U.S.C. 603(a).

risks can have an impact on public companies' financial performance or position and may be material to investors in making investment or voting decisions. For this reason, many investors—including shareholders, investment advisors, and investment management companies—currently seek information about climate-related risks from companies to inform their investment decision-making. Furthermore, many companies have begun to provide some of this information voluntarily in response to investor demand and in recognition of the potential financial effects of climate-related risks on their businesses. We are concerned that the existing voluntary disclosures of climate-related risks do not adequately protect investors. For this reason, mandatory disclosures may be necessary or appropriate to improve the consistency, comparability, and reliability of this information. The reasons for, and objectives of, the proposed amendments are discussed in more detail in Section II above.

B. Legal Basis

We are proposing the amendments contained in this release under the authority set forth in Sections 7, 10, 19(a), and 28 of the Securities Act, as amended, and Sections 3(b), 12, 13, 15, 23(a), and 36 of the Exchange Act, as amended.

C. Small Entities Subject to the Proposed Rules

The proposed amendments would affect some issuers that are small entities. The RFA defines "small entity" to mean "small business," "small organization," or "small governmental jurisdiction."[1065] For purposes of the RFA, under 17 CFR 240.0-10(a), an issuer, other than an investment company, is a "small business" or "small organization" if it had total assets of $5

[1065] 5 U.S.C. 601(6).

million or less on the last day of its most recent fiscal year and, under 17 CFR 230.157, is also engaged or proposing to engage in an offering of securities that does not exceed $5 million.

The proposed rules would apply to a registrant when filing a Securities Act or Exchange Act registration statement or an Exchange Act annual or other periodic report. We estimate that there are 1,004 registrants that are small entities that would be affected by the proposed rules.

D. Reporting, Recordkeeping, and Other Compliance Requirements

The proposed amendments would require a registrant, including a small entity, to disclose certain climate-related information, including data about their GHG emissions, when filing a Securities Act or Exchange Act registration statement or Exchange Act annual or other periodic report. In particular, like larger registrants, small entities would be required to disclose information about: the oversight of their boards and management regarding climate-related risks; any material impacts of climate-related risks on their consolidated financial statements, business, strategy, and outlook; their risk management of climate-related risks; climate-related targets or goals, if any; and certain financial statement metrics. In addition, like other registrants, small entities would be required to disclose their Scopes 1 and 2 emissions. We anticipate that the nature of any benefits or costs associated with the above proposed amendments would be similar for large and small entities. Accordingly, we refer to the discussion of the proposed amendments' economic effects on all affected parties, including small entities, in Section IV.C. Consistent with that discussion, we anticipate that the economic benefits and costs likely would vary widely among small entities based on a number of factors, including the nature and conduct of their businesses, which makes it difficult to project the economic impact on small entities with precision. However, we request comment on how the proposed amendments would affect small entities.

While small entities would not be exempt from the full scope of the proposed amendments, they would be exempt from the Scope 3 emissions disclosure requirements, which would likely impose the greatest compliance burden for registrants due to the complexity of data gathering, calculation, and assessment required for that type of emissions.[1066] Small entities would also have a longer transition period to comply with the proposed rules than other registrants.[1067] We believe that these accommodations would reduce the proposed rules' compliance burden for small entities that, compared to larger registrants with more resources, may be less able to absorb the costs associated with reporting of Scope 3 emissions and may need additional time to allocate the resources necessary to begin providing climate-related disclosures.

E. Duplicative, Overlapping, or Conflicting Federal Rules

The proposed rules do not duplicate or conflict with other existing federal rules. As discussed in Section IV, some registrants currently report certain GHG emissions via the EPA's 2009 mandatory Greenhouse Gas Reporting Program. However, as discussed above, the reporting requirements of the EPA's program and the resulting data are different and more suited to the purpose of building a national inventory of GHG emissions rather than allowing investors to assess emissions-related risks to individual registrants.

[1066] *See supra* Section II.G.3 and II.L (discussing the proposed exemption from Scope 3 emissions disclosure for smaller reporting companies).

[1067] *See supra* Section II.L (discussing the proposed additional two years for smaller reporting companies to comply with the proposed rules compared to large accelerated filers).

F. Significant Alternatives

The RFA directs us to consider alternatives that would accomplish our stated objectives, while minimizing any significant economic impact on small entities. In connection with the proposed amendments, we considered the following alternatives:

- Establishing different compliance or reporting requirements that take into account the resources available to small entities;
- Clarifying, consolidating, or simplifying compliance and reporting requirements under the rules for small entities;
- Using performance rather than design standards; and
- Exempting small entities from all or part of the requirements.

As discussed above, the proposed amendments would exempt small entities from certain GHG emissions disclosure requirements that would likely impose the greatest compliance burden on registrants compared to other proposed disclosure requirements. In addition, while there would be a transition period for all registrants to comply with the proposed amendments, small entities would have an additional two more years to comply with the proposed rules than large accelerated filers and an additional year compared to other registrants. We believe that this scaled and phased-in approach would help minimize the economic impact of the proposed amendments on small entities. We are not, however, proposing a complete exemption from the proposed amendments for SRCs because, due to their broad impact across industries and jurisdictions, climate-related risks may materially impact the operations and financial condition of domestic and foreign issuers, both large and small.

For similar reasons, other than the exemption for reporting Scope 3 emissions by SRCs, we are not proposing to clarify, consolidate, or simplify the proposed disclosure requirements for small entities. A key objective of the proposed amendments is to elicit consistent, comparable and reliable information about climate-related risks across registrants. Alternative compliance requirements for small entities could undermine that goal.

The proposed amendments are primarily based on performance standards with some provisions that are more like design standards. For example, while the proposed amendments include certain concepts, such as scopes, developed by the GHG Protocol, they do not require a registrant to use the GHG Protocol's methodology when calculating its GHG emissions if another methodology better suits its circumstances. Using a performance standard for calculation of GHG emissions would provide registrants with some flexibility regarding how to comply with the proposed GHG emissions requirement while still providing useful information for investors about the various scopes of emissions. Similarly, the proposed amendments would require a registrant that is a large accelerated filer or an accelerated filer to include an attestation report covering its Scopes 1 and 2 emissions that would require the report to meet certain minimum criteria while permitting the filer, at its option, to obtain additional levels of assurance. In contrast, the proposed amendments would require all registrants, including small entities, to express their GHG emissions both disaggregated by each constituent greenhouse gas and in the aggregate, expressed in terms of carbon dioxide equivalent (CO_2e). Using a design standard for the expression of a registrant's GHG emissions would enhance the comparability of this disclosure for investors.

Request for Comment

We encourage the submission of comments with respect to any aspect of this IRFA. In particular, we request comments regarding:

- How the proposed rule and form amendments can achieve their objective while lowering the burden on small entities;
- The number of small entity companies that may be affected by the proposed rule and form amendments;
- The existence or nature of the potential effects of the proposed amendments on small entity companies discussed in the analysis;
- How to quantify the effects of the proposed amendments; and
- Whether there are any federal rules that duplicate, overlap, or conflict with the proposed amendments.

Commenters are asked to describe the nature of any effect and provide empirical data supporting the extent of that effect. Comments will be considered in the preparation of the Final Regulatory Flexibility Analysis, if the proposed rules are adopted, and will be placed in the same public file as comments on the proposed rules themselves.

VII. SMALL BUSINESS REGULATORY ENFORCEMENT FAIRNESS ACT

For purposes of the Small Business Regulatory Enforcement Fairness Act of 1996 ("SBREFA"),[1068] the Commission must advise OMB as to whether the proposed amendments constitute a "major" rule. Under SBREFA, a rule is considered "major" where, if adopted, it results in or is likely to result in:

- An annual effect on the U.S. economy of $100 million or more;
- A major increase in costs or prices for consumers or individual industries; or
- Significant adverse effects on competition, investment, or innovation.

[1068] 5 U.S.C. 801 *et seq*.

We request comment on whether our proposal would be a "major rule" for purposes of SBREFA. In particular, we request comment and empirical data on:

- The potential effect on the U.S. economy on an annual basis;
- Any potential increase in costs or prices for consumers or individual industries; and
- Any potential adverse effect on competition, investment, or innovation.

VIII. STATUTORY AUTHORITY

The amendments contained in this release are being proposed under the authority set forth in Sections 7, 10, 19(a), and 28 of the Securities Act, as amended, and Sections 3(b), 12, 13, 15, 23(a), and 36 of the Exchange Act, as amended.

List of Subjects in

17 CFR Parts 210, 229, 232, 239, and 249

Accountants; Accounting; Administrative practice and procedure, Reporting and recordkeeping requirements, Securities.

TEXT OF THE PROPOSED RULE AND FORM AMENDMENTS

For the reasons set out in the preamble, the Commission is proposing to amend title 17, chapter II of the Code of Federal Regulations as follows:

PART 210 – FORM AND CONTENT OF AND REQUIREMENTS FOR FINANCIAL STATEMENTS, SECURITIES ACT OF 1933, SECURITIES EXCHANGE ACT OF 1934, INVESTMENT COMPANY ACT OF 1940, INVESTMENT ADVISERS ACT OF 1940, AND ENERGY POLICY AND CONSERVATION ACT OF 1975

1. The authority citation for part 210 continues to read as follows:

Authority: 15 U.S.C. 77f, 77g, 77h, 77j, 77s, 77z-2, 77z-3, 77aa(25), 77aa(26), 77nn(25), 77nn(26), 78c, 78j-1, 78*l*, 78m, 78n, 78o(d), 78q, 78u-5, 78w, 78ll, 78mm, 80a-8, 80a20, 80a-29, 80a-30, 80a-31, 80a-37(a), 80b-3, 80b-11, 7202 and 7262, and sec. 102(c), Pub. L. 112-106, 126 Stat. 310 (2012), unless otherwise noted.

2. Amend § 210.8-01 by revising paragraph (b) to read as follows:

§ 210.8-01 General requirements for Article 8

* * * * *

(b) Smaller reporting companies electing to prepare their financial statements with the form and content required in Article 8 need not apply the other form and content requirements in 17 CFR Part 210 (Regulation S-X) with the exception of the following:

(1) The report and qualifications of the independent accountant shall comply with the requirements of §§ 210.2-01 through 210.2-07 (Article 2); and

(2) The description of accounting policies shall comply with § 210.4-08(n);

(3) Smaller reporting companies engaged in oil and gas producing activities shall follow the financial accounting and reporting standards specified in § 210.4-10 with respect to such activities; and

(4) Sections 210.14-01 and 210.14-02 (Article 14).

* * * * *

3. Amend § 210 by adding an undesignated center heading and §§ 210.14-01 and 210.14-02 to read as follows:

Article 14 – Climate-related disclosure

Sec.

210.14-01 Climate-related disclosure instructions.

210.14-02 Climate-related metrics.

§ 210.14-01 Climate-related disclosure instructions.

(a) *General*. A registrant must include disclosure pursuant to § 210.14-02 in any filing that is required to include disclosure pursuant to subpart 229.1500 of this chapter and that also requires the registrant to include its audited financial statements. The disclosure pursuant to § 210.14-02 must be included in a note to the financial statements included in such filing.

(b) *Definitions*. The definitions in § 229.1500 (Item 1500 of Regulation S-K) apply to this Article 14 of Regulation S-X.

(c) *Basis of calculation*. When calculating the metrics in this Article 14, except where otherwise indicated, a registrant must:

(1) Use financial information that is consistent with the scope of the rest of its consolidated financial statements included in the filing; and

(2) Whenever applicable, apply the same accounting principles that it is required to apply in preparation of the rest of its consolidated financial statements included in the filing.

(d) *Historical periods*. Disclosure must be provided for the registrant's most recently completed fiscal year, and for the historical fiscal year(s) included in the consolidated financial statements in the filing (*e.g.,* a registrant that is required to include balance sheets as of the end of its two most recent fiscal years and income statements and cash flow statements as of the end of its three most recent fiscal years would be required to disclose two years of the climate-related metrics that correspond to balance sheet line items and three years of the climate-related metrics that correspond to income statement or cash flow statement line items).

§ 210.14-02 Climate-related metrics.

(a) *Contextual information.* Provide contextual information, describing how each specified metric was derived, including a description of significant inputs and assumptions used, and, if applicable, policy decisions made by the registrant to calculate the specified metrics.

(b) *Disclosure thresholds*.

(1) Disclosure of the financial impact on a line item in the registrant's consolidated financial statements pursuant to paragraphs (c) and (d) of this section (including any impacts included pursuant to paragraphs (i) and (j) of this section) is not required if the sum of the absolute values of all the impacts on the line item is less than one percent of the total line item for the relevant fiscal year.

(2) Disclosure of the aggregate amount of expenditure expensed or the aggregate amount of capitalized costs incurred pursuant to paragraphs (e) and (f) of this section (including any impacts included pursuant to paragraphs (i) and (j) of this section) is not required if such amount is less than one percent of the total expenditure expensed or total capitalized costs incurred, respectively, for the relevant fiscal year.

(c) *Financial impacts of severe weather events and other natural conditions.* Disclose the impact of severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise on any relevant line items in the registrant's consolidated financial statements during the fiscal years presented. Disclosure must be presented, at a minimum, on an aggregated line-by-line basis for all negative impacts and, separately, at a minimum, on an aggregated line-by-line basis for all positive impacts. Impacts may include, for example:

(1) Changes to revenues or costs from disruptions to business operations or supply chains;

(2) Impairment charges and changes to the carrying amount of assets (such as inventory, intangibles, and property, plant and equipment) due to the assets being exposed to severe weather, flooding, drought, wildfires, extreme temperatures, and sea level rise;

(3) Changes to loss contingencies or reserves (such as environmental reserves or loan loss allowances) due to impact from severe weather events; and

(4) Changes to total expected insured losses due to flooding or wildfire patterns.

(d) *Financial impacts related to transition activities.* Disclose the impact of any efforts to reduce GHG emissions or otherwise mitigate exposure to transition risks on any relevant line items in the registrant's consolidated financial statements during the fiscal years presented. Disclosure must be presented, at a minimum, on an aggregated line-by-line basis for all negative impacts and, separately, at a minimum, on an aggregated line-by-line basis for all positive impacts. Impacts may include, for example:

(1) Changes to revenue or cost due to new emissions pricing or regulations resulting in the loss of a sales contract;

(2) Changes to operating, investing, or financing cash flow from changes in upstream costs, such as transportation of raw materials;

(3) Changes to the carrying amount of assets (such as intangibles and property, plant, and equipment) due to, among other things, a reduction of the asset's useful life or a change in the asset's salvage value by being exposed to transition activities; and

(4) Changes to interest expense driven by financing instruments such as climate-linked bonds issued where the interest rate increases if certain climate-related targets are not met.

(e) *Expenditure to mitigate risks of severe weather events and other natural conditions.* Disclose separately the aggregate amount of expenditure expensed and the aggregate amount of capitalized costs incurred during the fiscal years presented to mitigate the risks from severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. For example, a registrant may be required to disclose the amount of expense or capitalized costs, as applicable, to increase the resilience of assets or operations, retire or shorten the estimated useful lives of impacted assets, relocate assets or operations at risk, or otherwise reduce the future impact of severe weather events and other natural conditions on business operations.

(f) *Expenditure related to transition activities.* Disclose separately the aggregate amount of expenditure expensed and the aggregate amount of capitalized costs incurred during the fiscal years presented to reduce GHG emissions or otherwise mitigate exposure to transition risks. For example, a registrant may be required to disclose the amount of expense or capitalized costs, as applicable, related to research and development of new technologies, purchase of assets, infrastructure, or products that are intended to reduce GHG emissions, increase energy efficiency, offset emissions (purchase of energy credits), or improve other resource efficiency. A registrant that has disclosed GHG emissions reduction targets or other climate-related commitments must disclose the expenditures and costs related to meeting its targets, commitments, and goals, if any, in the fiscal years presented.

(g) *Financial estimates and assumptions impacted by severe weather events and other natural conditions.* Disclose whether the estimates and assumptions the registrant used to produce the consolidated financial statements were impacted by exposures to risks and uncertainties associated with, or known impacts from, severe weather events and other natural conditions, such as flooding, drought, wildfires, extreme temperatures, and sea level rise. If yes, provide a qualitative description of how the development of such estimates and assumptions were impacted by such events.

(h) *Financial estimates and assumptions impacted by transition activities.* Disclose whether the estimates and assumptions the registrant used to produce the consolidated financial statements were impacted by risks and uncertainties associated with, or known impacts from, a potential transition to a lower carbon economy or any climate-related targets disclosed by the registrant. If yes, provide a qualitative description of how the development of such estimates and assumptions were impacted by such a potential transition or the registrant's disclosed climate-related targets.

(i) *Impact of identified climate-related risks.* A registrant must also include the impact of any climate-related risks (separately by physical risks and transition risks, as defined in § 229.1500(c)), identified by the registrant pursuant to § 229.1502(a), on any of the financial statement metrics disclosed pursuant to paragraphs (c) through (h) of this section.

(j) *Impact of climate-related opportunities*. A registrant may also include the impact of any opportunities arising from severe weather events and other natural conditions, any impact of efforts to pursue climate-related opportunities associated with transition activities, and the impact of any other climate-related opportunities, including those identified by the registrant pursuant to § 229.1502(a), on any of the financial statement metrics disclosed pursuant to paragraphs (c) through (h) of this section. If a registrant makes a policy decision to disclose the impact of an opportunity, it must do so consistently for the fiscal years presented, including for each financial statement line item and all relevant opportunities identified by the registrant.

PART 229—STANDARD INSTRUCTIONS FOR FILING FORMS UNDER SECURITIES ACT OF 1933, SECURITIES EXCHANGE ACT OF 1934 AND ENERGY POLICY AND CONSERVATION ACT OF 1975—REGULATION S-K

4. The authority citation for part 229 continues to read as follows:

Authority: 15 U.S.C. 77e, 77f, 77g, 77h, 77j, 77k, 77s, 77z-2, 77z-3, 77aa(25), 77aa(26), 77ddd, 77eee, 77ggg, 77hhh, 77iii, 77jjj, 77nnn, 77sss, 78c, 78i, 78j, 78j-3, 78l, 78m, 78n, 78n-1, 78o, 78u-5, 78w, 78ll, 78 mm, 80a-8, 80a-9, 80a-20, 80a-29, 80a-30, 80a-31(c), 80a37, 80a-38(a), 80a-39, 80b-11 and 7201 et seq.; 18 U.S.C. 1350; sec. 953(b), Pub. L. 111-203, 124 Stat. 1904 (2010); and sec. 102(c), Pub. L. 112-106, 126 Stat. 310 (2012).

5. Add subpart 229.1500 ("Climate-Related Disclosure") to read as follows:

Subpart 229.1500—Climate-Related Disclosure

Sec.

229.1500 (Item 1500) Definitions.

229.1501 (Item 1501) Governance.

229.1502 (Item 1502) Strategy, business model, and outlook.

229.1503 (Item 1503) Risk management.

229.1504 (Item 1504) GHG emissions metrics.

229.1505 (Item 1505) Attestation of Scope 1 and Scope 2 emissions disclosure.

229.1506 (Item 1506) Targets and goals.

229.1507 (Item 1507) Interactive data requirement.

§ 229.1500 (Item 1500) Definitions.

As used in this subpart, these terms have the following meanings:

(a) *Carbon offsets* represents an emissions reduction or removal of greenhouse gases ("GHG") in a manner calculated and traced for the purpose of offsetting an entity's GHG emissions.

(b) *Climate-related opportunities* means the actual or potential positive impacts of climate-related conditions and events on a registrant's consolidated financial statements, business operations, or value chains, as a whole.

(c) *Climate-related risks* means the actual or potential negative impacts of climate-related conditions and events on a registrant's consolidated financial statements, business operations, or value chains, as a whole. Climate-related risks include the following:

(1) *Physical risks* include both acute risks and chronic risks to the registrant's business operations or the operations of those with whom it does business.

(2) *Acute risks* are event-driven and may relate to shorter term extreme weather events, such as hurricanes, floods, and tornadoes, among other events.

(3) *Chronic risks* relate to longer term weather patterns and related effects, such as sustained higher temperatures, sea level rise, drought, and increased wildfires, as well as related effects such as decreased arability of farmland, decreased habitability of land, and decreased availability of fresh water.

(4) *Transition risks* are the actual or potential negative impacts on a registrant's consolidated financial statements, business operations, or value chains attributable to regulatory, technological, and market changes to address the mitigation of, or adaptation to, climate-related risks, such as increased costs attributable to changes in law or policy, reduced market demand for carbon-intensive products leading to decreased prices or profits for such products, the devaluation or abandonment of assets, risk of legal liability and litigation defense costs,

competitive pressures associated with the adoption of new technologies, reputational impacts (including those stemming from a registrant's customers or business counterparties) that might trigger changes to market behavior, consumer preferences or behavior, and registrant behavior.

(d) *Carbon dioxide equivalent* ("CO_2e") means the common unit of measurement to indicate the global warming potential ("GWP") of each greenhouse gas, expressed in terms of the GWP of one unit of carbon dioxide ("CO_2").

(e) *Emission factor* means a multiplication factor allowing actual GHG emissions to be calculated from available activity data or, if no activity data is available, economic data, to derive absolute GHG emissions. Examples of activity data include kilowatt-hours of electricity used, quantity of fuel used, output of a process, hours of operation of equipment, distance travelled, and floor area of a building.

(f) *Global warming potential* ("GWP") means a factor describing the global warming impacts of different greenhouse gases. It is a measure of how much energy will be absorbed in the atmosphere over a specified period of time as a result of the emission of one ton of a greenhouse gas, relative to the emissions of one ton of carbon dioxide (CO_2).

(g) *Greenhouse gases* ("GHG") means carbon dioxide (CO_2), methane ("CH_4"), nitrous oxide ("N_2O"), nitrogen trifluoride ("NF_3"), hydrofluorocarbons ("HFCs"), perfluorocarbons ("PFCs"), and sulfur hexafluoride ("SF_6").

(h) *GHG emissions* means direct and indirect emissions of greenhouse gases expressed in metric tons of carbon dioxide equivalent (CO_2e), of which:

(1) Direct emissions are GHG emissions from sources that are owned or controlled by a registrant.

(2) Indirect emissions are GHG emissions that result from the activities of the registrant, but occur at sources not owned or controlled by the registrant.

(i) *GHG intensity* (or *carbon intensity*) means a ratio that expresses the impact of GHG emissions per unit of economic value (*e.g.*, metric tons of CO_2e per unit of total revenues, using the registrant's reporting currency) or per unit of production (*e.g.*, metric tons of CO_2e per product produced).

(j) *Internal carbon price* means an estimated cost of carbon emissions used internally within an organization.

(k) *Location* means a ZIP code or, in a jurisdiction that does not use ZIP codes, a similar subnational postal zone or geographic location.

(l) *Operational boundaries* means the boundaries that determine the direct and indirect emissions associated with the business operations owned or controlled by a registrant.

(m) *Organizational boundaries* means the boundaries that determine the operations owned or controlled by a registrant for the purpose of calculating its GHG emissions.

(n) *Renewable energy credit or certificate* ("*REC*") means a credit or certificate representing each megawatt-hour (1 MWh or 1,000 kilowatt-hours) of renewable electricity generated and delivered to a power grid.

(o) *Scenario analysis* means a process for identifying and assessing a potential range of outcomes of various possible future climate scenarios, and how climate-related risks may impact a registrant's operations, business strategy, and consolidated financial statements over time. For example, registrants might use scenario analysis to test the resilience of their strategies under certain future climate scenarios, such as those that assume global temperature increases of 3 °C, 2 °C, and 1.5 ºC above pre-industrial levels.

(p) *Scope 1 emissions* are direct GHG emissions from operations that are owned or controlled by a registrant.

(q) *Scope 2 emissions* are indirect GHG emissions from the generation of purchased or acquired electricity, steam, heat, or cooling that is consumed by operations owned or controlled by a registrant.

(r) *Scope 3 emissions* are all indirect GHG emissions not otherwise included in a registrant's Scope 2 emissions, which occur in the upstream and downstream activities of a registrant's value chain.

(1) Upstream activities in which Scope 3 emissions might occur include:

(i) A registrant's purchased goods and services;

(ii) A registrant's capital goods;

(iii) A registrant's fuel and energy related activities not included in Scope 1 or Scope 2 emissions;

(iv) Transportation and distribution of purchased goods, raw materials, and other inputs;

(v) Waste generated in a registrant's operations;

(vi) Business travel by a registrant's employees;

(vii) Employee commuting by a registrant's employees; and

(viii) A registrant's leased assets related principally to purchased or acquired goods or services.

(2) Downstream activities in which Scope 3 emissions might occur include:

(i) Transportation and distribution of a registrant's sold products, goods or other outputs;

(ii) Processing by a third party of a registrant's sold products;

(iii) Use by a third party of a registrant's sold products;

(iv) End-of-life treatment by a third party of a registrant's sold products;

(v) A registrant's leased assets related principally to the sale or disposition of goods or services;

(vi) A registrant's franchises; and

(vii) Investments by a registrant.

(s) *Transition plan* means a registrant's strategy and implementation plan to reduce climate-related risks, which may include a plan to reduce its GHG emissions in line with its own commitments or commitments of jurisdictions within which it has significant operations.

(t) *Value chain* means the upstream and downstream activities related to a registrant's operations. Upstream activities in connection with a value chain may include activities by a party other than the registrant that relate to the initial stages of a registrant's production of a good or service (*e.g.*, materials sourcing, materials processing, and supplier activities). Downstream activities in connection with a value chain may include activities by a party other than the registrant that relate to processing materials into a finished product and delivering it or providing a service to the end user (*e.g.*, transportation and distribution, processing of sold products, use of sold products, end of life treatment of sold products, and investments).

§ 229.1501 (Item 1501) Governance.

(a)(1) Describe the board of director's oversight of climate-related risks. Include the following, as applicable:

(i) The identity of any board members or board committee responsible for the oversight of climate-related risks;

(ii) Whether any member of the board of directors has expertise in climate-related risks, with disclosure in such detail as necessary to fully describe the nature of the expertise;

(iii) The processes by which the board of directors or board committee discusses climate-related risks, including how the board is informed about climate-related risks, and the frequency of such discussion;

(iv) Whether and how the board of directors or board committee considers climate-related risks as part of its business strategy, risk management, and financial oversight; and

(v) Whether and how the board of directors sets climate-related targets or goals, and how it oversees progress against those targets or goals, including the establishment of any interim targets or goals.

(2) If applicable, a registrant may also describe the board of director's oversight of climate-related opportunities.

(b)(1) Describe management's role in assessing and managing climate-related risks. Include the following, as applicable:

(i) Whether certain management positions or committees are responsible for assessing and managing climate-related risks and, if so, the identity of such positions or committees and the relevant expertise of the position holders or members in such detail as necessary to fully describe the nature of the expertise;

(ii) The processes by which such positions or committees are informed about and monitor climate-related risks; and

(iii) Whether and how frequently such positions or committees report to the board or a committee of the board on climate-related risks.

(2) If applicable, a registrant may also describe management's role in assessing and managing climate-related opportunities.

§ 229.1502 (Item 1502) Strategy, business model, and outlook.

(a) Describe any climate-related risks reasonably likely to have a material impact on the registrant, including on its business or consolidated financial statements, which may manifest over the short, medium, and long term. If applicable, a registrant may also disclose the actual and potential impacts of any climate-related opportunities when responding to any of the provisions in this section.

(1) Discuss such climate-related risks, specifying whether they are physical or transition risks and the nature of the risks presented.

(i) For physical risks, describe the nature of the risk, including if it may be categorized as an acute or chronic risk, and the location and nature of the properties, processes, or operations subject to the physical risk.

(A) If a risk concerns the flooding of buildings, plants, or properties located in flood hazard areas, disclose the percentage of those assets (square meters or acres) that are located in flood hazard areas in addition to their location.

(B) If a risk concerns the location of assets in regions of high or extremely high water stress, disclose the amount of assets (*e.g.*, book value and as a percentage of total assets) located in those regions in addition to their location. Also disclose the percentage of the registrant's total water usage from water withdrawn in those regions.

(ii) For transition risks, describe the nature of the risk, including whether it relates to regulatory, technological, market (including changing consumer, business counterparty, and investor preferences), liability, reputational, or other transition-related factors, and how those factors impact the registrant. A registrant that has significant operations in a jurisdiction that has made a GHG emissions reduction commitment may be exposed to transition risks related to the implementation of the commitment.

(2) Describe how the registrant defines short-, medium-, and long-term time horizons, including how it takes into account or reassesses the expected useful life of the registrant's assets and the time horizons for the registrant's climate-related planning processes and goals.

(b) Describe the actual and potential impacts of any climate-related risks identified in response to paragraph (a) of this section on the registrant's strategy, business model, and outlook.

(1) Include impacts on the registrant's:

(i) Business operations, including the types and locations of its operations;

(ii) Products or services;

(iii) Suppliers and other parties in its value chain;

(iv) Activities to mitigate or adapt to climate-related risks, including adoption of new technologies or processes;

(v) Expenditure for research and development; and

(vi) Any other significant changes or impacts.

(2) Include the time horizon for each described impact (*i.e.*, in the short, medium, or long term, as defined in response to paragraph (a) of this section).

(c) Discuss whether and how any impacts described in response to paragraph (b) of this section are considered as part of the registrant's business strategy, financial planning, and capital allocation. Provide both current and forward-looking disclosures that facilitate an understanding of whether the implications of the identified climate-related risks have been integrated into the registrant's business model or strategy, including how any resources are being used to mitigate climate-related risks. Include in this discussion how any of the metrics referenced in § 210.14-02 and § 229.1504 or any of the targets referenced in § 229.1506 relate to the registrant's business model or business strategy. If applicable, include in this discussion the role that carbon offsets or RECs play in the registrant's climate-related business strategy.

(d) Provide a narrative discussion of whether and how any climate-related risks described in response to paragraph (a) of this section have affected or are reasonably likely to affect the registrant's consolidated financial statements. The discussion should include any of the climate-related metrics referenced in § 210.14-02 that demonstrate that the identified climate-related risks have had a material impact on reported financial condition or operations.

(e)(1) If a registrant maintains an internal carbon price, disclose:

(i) The price in units of the registrant's reporting currency per metric ton of CO_2e;

(ii) The total price, including how the total price is estimated to change over time, if applicable;

(iii) The boundaries for measurement of overall CO_2e on which the total price is based if different from the GHG emission organizational boundary required pursuant to § 229.1504(e)(2); and

(iv) The rationale for selecting the internal carbon price applied.

(2) Describe how the registrant uses any internal carbon price described in response to paragraph (e)(1) of this section to evaluate and manage climate-related risks.

(3) If a registrant uses more than one internal carbon price, it must provide the disclosures required by this section for each internal carbon price, and disclose its reasons for using different prices.

(f) Describe the resilience of the registrant's business strategy in light of potential future changes in climate-related risks. Describe any analytical tools, such as scenario analysis, that the registrant uses to assess the impact of climate-related risks on its business and consolidated financial statements, and to support the resilience of its strategy and business model. If the registrant uses scenario analysis to assess the resilience of its business strategy to climate-related risks, disclose the scenarios considered (*e.g.*, an increase of no greater than 3 ºC, 2 ºC, or 1.5 ºC above pre-industrial levels), including parameters, assumptions, and analytical choices, and the projected principal financial impacts on the registrant's business strategy under each scenario. The disclosure should include both qualitative and quantitative information.

§ 229.1503 (Item 1503) Risk management.

(a) Describe any processes the registrant has for identifying, assessing, and managing climate-related risks. If applicable, a registrant may also describe any processes for identifying, assessing, and managing climate-related opportunities when responding to any of the provisions in this section.

(1) When describing any processes for identifying and assessing climate-related risks, disclose, as applicable, how the registrant:

(i) Determines the relative significance of climate-related risks compared to other risks;

(ii) Considers existing or likely regulatory requirements or policies, such as GHG emissions limits, when identifying climate-related risks;

(iii) Considers shifts in customer or counterparty preferences, technological changes, or changes in market prices in assessing potential transition risks; and

(iv) Determines the materiality of climate-related risks, including how it assesses the potential scope and impact of an identified climate-related risk, such as the risks identified in response to § 229.1502.

(2) When describing any processes for managing climate-related risks, disclose, as applicable, how the registrant:

(i) Decides whether to mitigate, accept, or adapt to a particular risk;

(ii) Prioritizes whether to address climate-related risks; and

(iii) Determines how to mitigate any high priority risks.

(b) Disclose whether and how any processes described in response to paragraph (a) of this section are integrated into the registrant's overall risk management system or processes. If a separate board or management committee is responsible for assessing and managing climate-related risks, a registrant should disclose how that committee interacts with the registrant's board or management committee governing risks.

(c)(1) If the registrant has adopted a transition plan as part of its climate-related risk management strategy, describe the plan, including the relevant metrics and targets used to identify and manage any physical and transition risks. To allow for an understanding of the registrant's progress to meet the plan's targets or goals over time, a registrant must update its disclosure about the transition plan each fiscal year by describing the actions taken during the year to achieve the plan's targets or goals.

(2) If the registrant has adopted a transition plan, discuss, as applicable:

(i) How the registrant plans to mitigate or adapt to any identified physical risks, including but not limited to those concerning energy, land, or water use and management;

(ii) How the registrant plans to mitigate or adapt to any identified transition risks, including the following:

(A) Laws, regulations, or policies that:

(*1*) Restrict GHG emissions or products with high GHG footprints, including emissions caps; or

(*2*) Require the protection of high conservation value land or natural assets;

(B) Imposition of a carbon price; and

(C) Changing demands or preferences of consumers, investors, employees, and business counterparties.

(3) If applicable, a registrant that has adopted a transition plan as part of its climate-related risk management strategy may also describe how it plans to achieve any identified climate-related opportunities, such as:

(i) The production of products that may facilitate the transition to a lower carbon economy, such as low emission modes of transportation and supporting infrastructure;

(ii) The generation or use of renewable power;

(iii) The production or use of low waste, recycled, or other consumer products that require less carbon intensive production methods;

(iv) The setting of conservation goals and targets that would help reduce GHG emissions; and

(v) The provision of services related to any transition to a lower carbon economy.

§ 229.1504 (Item 1504) GHG emissions metrics.

(a) *General*. Disclose a registrant's GHG emissions, as defined in § 229.1500(h), for its most recently completed fiscal year, and for the historical fiscal years included in its consolidated financial statements in the filing, to the extent such historical GHG emissions data is reasonably available.

(1) For each required disclosure of a registrant's Scopes 1, 2, and 3 emissions, disclose the emissions both disaggregated by each constituent greenhouse gas, as specified in § 229.1500(g), and in the aggregate, expressed in terms of CO_2e.

(2) When disclosing a registrant's Scopes 1, 2, and 3 emissions, exclude the impact of any purchased or generated offsets.

(b) *Scopes 1 and 2 emissions.*

(1) Disclose the registrant's total Scope 1 emissions and total Scope 2 emissions separately after calculating them from all sources that are included in the registrant's organizational and operational boundaries.

(2) When calculating emissions pursuant to paragraph (b)(1) of this section, a registrant may exclude emissions from investments that are not consolidated, are not proportionately consolidated, or that do not qualify for the equity method of accounting in the registrant's consolidated financial statements.

(c) *Scope 3 emissions.*

(1) Disclose the registrant's total Scope 3 emissions if material. A registrant must also disclose its Scope 3 emissions if it has set a GHG emissions reduction target or goal that includes its Scope 3 emissions. Disclosure of a registrant's Scope 3 emissions must be separate from disclosure of its Scopes 1 and 2 emissions. If required to disclose Scope 3 emissions, identify the categories of upstream or downstream activities that have been included in the calculation of the Scope 3 emissions. If any category of Scope 3 emissions is significant to the registrant, identify all such categories and provide Scope 3 emissions data separately for them, together with the registrant's total Scope 3 emissions.

(2) If required to disclose Scope 3 emissions, describe the data sources used to calculate the registrant's Scope 3 emissions, including the use of any of the following:

(i) Emissions reported by parties in the registrant's value chain, and whether such reports were verified by the registrant or a third party, or unverified;

(ii) Data concerning specific activities, as reported by parties in the registrant's value chain; and

(iii) Data derived from economic studies, published databases, government statistics, industry associations, or other third-party sources outside of a registrant's value chain, including industry averages of emissions, activities, or economic data.

(3) A smaller reporting company, as defined by §§ 229.10(f)(1), 230.405, and 240.12b-2 of this chapter, is exempt from, and need not comply with, the disclosure requirements of this paragraph (c).

(d) *GHG intensity.*

(1) Using the sum of Scope 1 and 2 emissions, disclose GHG intensity in terms of metric tons of CO_2e per unit of total revenue (using the registrant's reporting currency) and per unit of production relevant to the registrant's industry for each fiscal year included in the consolidated financial statements. Disclose the basis for the unit of production used.

(2) If Scope 3 emissions are otherwise disclosed, separately disclose GHG intensity using Scope 3 emissions only.

(3) If a registrant has no revenue or unit of production for a fiscal year, it must disclose another financial measure of GHG intensity or another measure of GHG intensity per unit of economic output, as applicable, with an explanation of why the particular measure was used.

(4) A registrant may also disclose other measures of GHG intensity, in addition to metric tons of CO_2e per unit of total revenue (using the registrant's reporting currency) and per unit of production, if it includes an explanation of why a particular measure was used and why the registrant believes such measure provides useful information to investors.

(e) *Methodology and related instructions.*

(1) A registrant must describe the methodology, significant inputs, and significant assumptions used to calculate its GHG emissions. The description of the registrant's methodology must include the registrant's organizational boundaries, operational boundaries (including any approach to categorization of emissions and emissions sources), calculation approach (including any emission factors used and the source of the emission factors), and any calculation tools used to calculate the GHG emissions. A registrant's description of its approach to categorization of emissions and emissions sources should explain how it determined the emissions to include as direct emissions, for the purpose of calculating its Scope 1 emissions, and indirect emissions, for the purpose of calculating its Scope 2 emissions.

(2) The organizational boundary and any determination of whether a registrant owns or controls a particular source for GHG emissions must be consistent with the scope of entities, operations, assets, and other holdings within its business organization as those included in, and based upon the same set of accounting principles applicable to, the registrant's consolidated financial statements.

(3) A registrant must use the same organizational boundaries when calculating its Scope 1 emissions and Scope 2 emissions. If required to disclose Scope 3 emissions, a registrant must also apply the same organizational boundaries used when determining its Scopes 1 and 2 emissions as an initial step in identifying the sources of indirect emissions from activities in its value chain over which it lacks ownership and control and which must be included in the calculation of its Scope 3 emissions. Once a registrant has determined its organizational and operational boundaries, a registrant must be consistent in its use of those boundaries when calculating its GHG emissions.

(4) A registrant may use reasonable estimates when disclosing its GHG emissions as long as it also describes the assumptions underlying, and its reasons for using, the estimates.

(i) When disclosing its GHG emissions for its most recently completed fiscal year, if actual reported data is not reasonably available, a registrant may use a reasonable estimate of its GHG emissions for its fourth fiscal quarter, together with actual, determined GHG emissions data for the first three fiscal quarters, as long as the registrant promptly discloses in a subsequent filing any material difference between the estimate used and the actual, determined GHG emissions data for the fourth fiscal quarter.

(ii) In addition to the use of reasonable estimates, a registrant may present its estimated Scope 3 emissions in terms of a range as long as it discloses its reasons for using the range and the underlying assumptions.

(5) A registrant must disclose, to the extent material and as applicable, any use of third-party data when calculating its GHG emissions, regardless of the particular scope of emissions. When disclosing the use of third-party data, it must identify the source of such data and the process the registrant undertook to obtain and assess such data.

(6) A registrant must disclose any material change to the methodology or assumptions underlying its GHG emissions disclosure from the previous fiscal year.

(7) A registrant must disclose, to the extent material and as applicable, any gaps in the data required to calculate its GHG emissions. A registrant's GHG emissions disclosure should provide investors with a reasonably complete understanding of the registrant's GHG emissions in each scope of emissions. If a registrant discloses any data gaps encountered when calculating its GHG emissions, it must also discuss whether it used proxy data or another method to address

such gaps, and how its accounting for any data gaps has affected the accuracy or completeness of its GHG emissions disclosure.

(8) When determining whether its Scope 3 emissions are material, and when disclosing those emissions, in addition to emissions from activities in its value chain, a registrant must include GHG emissions from outsourced activities that it previously conducted as part of its own operations, as reflected in the financial statements for the periods covered in the filing.

(9) If required to disclose Scope 3 emissions, when calculating those emissions, if there was any significant overlap in the categories of activities producing the Scope 3 emissions, a registrant must describe the overlap, how it accounted for the overlap, and the effect on its disclosed total Scope 3 emissions.

(f) Liability for Scope 3 emissions disclosures.

(1) A statement within the coverage of paragraph (f)(2) of this section that is made by or on behalf of a registrant is deemed not to be a fraudulent statement (as defined in paragraph (f)(3) of this section), unless it is shown that such statement was made or reaffirmed without a reasonable basis or was disclosed other than in good faith.

(2) This paragraph (f) applies to any statement regarding Scope 3 emissions that is disclosed pursuant to §§ 229.1500 through 229.1506 and made in a document filed with the Commission.

(3) For the purpose of this paragraph (f), the term fraudulent statement shall mean a statement that is an untrue statement of material fact, a statement false or misleading with respect to any material fact, an omission to state a material fact necessary to make a statement not misleading, or that constitutes the employment of a manipulative, deceptive, or fraudulent device, contrivance, scheme, transaction, act, practice, course of business, or an artifice to

defraud as those terms are used in the Securities Act of 1933 or the Securities Exchange Act of 1934 or the rules or regulations promulgated thereunder.

§ 229.1505 Attestation of Scope 1 and Scope 2 emissions disclosure.

(a) *Attestation.*

(1) A registrant that is required to provide Scope 1 and Scope 2 emissions disclosure pursuant to § 229.1504 and that is an accelerated filer or a large accelerated filer must include an attestation report covering such disclosure in the relevant filing. For filings made by an accelerated filer or a large accelerated filer for the second and third fiscal years after the compliance date for § 229.1504, the attestation engagement must, at a minimum, be at a limited assurance level and cover the registrant's Scope 1 and Scope 2 emissions disclosure. For filings made by an accelerated filer or large accelerated filer for the fourth fiscal year after the compliance date for § 229.1504 and thereafter, the attestation engagement must be at a reasonable assurance level and, at a minimum, cover the registrant's Scope 1 and Scope 2 emissions disclosures.

(2) Any attestation report required under this § 229.1505 must be provided pursuant to standards that are publicly available at no cost and are established by a body or group that has followed due process procedures, including the broad distribution of the framework for public comment. An accelerated filer or a large accelerated filer obtaining voluntary assurance prior to the first required fiscal year must comply with subparagraph (e) of this section. Voluntary assurance obtained by an accelerated filer or a large accelerated filer thereafter must follow the requirements of paragraphs (b) through (d) of this section and must use the same attestation standard as the required assurance over Scope 1 and Scope 2.

(b) *GHG emissions attestation provider*. The GHG emissions attestation report required by paragraph (a) of this section must be prepared and signed by a GHG emissions attestation provider. A GHG emissions attestation provider means a person or a firm that has all of the following characteristics:

(1) Is an expert in GHG emissions by virtue of having significant experience in measuring, analyzing, reporting, or attesting to GHG emissions. Significant experience means having sufficient competence and capabilities necessary to:

(i) Perform engagements in accordance with professional standards and applicable legal and regulatory requirements; and

(ii) Enable the service provider to issue reports that are appropriate under the circumstances.

(2) Is independent with respect to the registrant, and any of its affiliates, for whom it is providing the attestation report, during the attestation and professional engagement period.

(i) A GHG emissions attestation provider is not independent if such attestation provider is not, or a reasonable investor with knowledge of all relevant facts and circumstances would conclude that such attestation provider is not, capable of exercising objective and impartial judgment on all issues encompassed within the attestation provider's engagement.

(ii) In determining whether a GHG emissions attestation provider is independent, the Commission will consider:

(A) Whether a relationship or the provision of a service creates a mutual or conflicting interest between the attestation provider and the registrant (or any of its affiliates), places the attestation provider in the position of attesting such attestation provider's own work, results in the attestation provider acting as management or an employee of the registrant (or any of its affiliates), or places the attestation provider in a position of being an advocate for the registrant (or any of its affiliates); and

(B) All relevant circumstances, including all financial or other relationships between the attestation provider and the registrant (or any of its affiliates), and not just those relating to reports filed with the Commission.

(iii) The term "affiliates" as used in this section has the meaning provided in 17 CFR 210.2-01, except that references to "audit" are deemed to be references to the attestation services provided pursuant to this section.

(iv) The term "attestation and professional engagement period" as used in this section means both:

(A) The period covered by the attestation report; and

(B) The period of the engagement to attest to the registrant's GHG emissions or to prepare a report filed with the Commission ("the professional engagement period"). The professional engagement period begins when the GHG attestation service provider either signs an initial engagement letter (or other agreement to attest a registrant's GHG emissions) or begins attest procedures, whichever is earlier.

(c) *Attestation report requirements*. The GHG emissions attestation report required by paragraph (a) of this section must be included in the separately captioned "Climate-Related Disclosure" section in the filing. The form and content of the attestation report must follow the requirements set forth by the attestation standard (or standards) used by the GHG emissions attestation provider. Notwithstanding the foregoing, at a minimum the report must include the following:

(1) An identification or description of the subject matter or assertion being reported on, including the point in time or period of time to which the measurement or evaluation of the subject matter or assertion relates;

(2) An identification of the criteria against which the subject matter was measured or evaluated;

(3) A statement that identifies the level of assurance provided and describes the nature of the engagement;

(4) A statement that identifies the attestation standard (or standards) used;

(5) A statement that describes the registrant's responsibility to report on the subject matter or assertion being reported on;

(6) A statement that describes the attestation provider's responsibilities in connection with the preparation of the attestation report;

(7) A statement that the attestation provider is independent, as required by paragraph (a) of this section;

(8) For a limited assurance engagement, a description of the work performed as a basis for the attestation provider's conclusion;

(9) A statement that describes significant inherent limitations, if any, associated with the measurement or evaluation of the subject matter against the criteria;

(10) The GHG emissions attestation provider's conclusion or opinion, based on the applicable attestation standard(s) used;

(11) The signature of the attestation provider (whether by an individual or a person signing on behalf of the attestation provider's firm);

(12) The city and state where the attestation report has been issued; and

(13) The date of the report.

(d) *Additional disclosures by the registrant*. In addition to including the GHG emissions attestation report required by paragraph (a) of this section, a large accelerated filer and an accelerated filer must disclose the following information within the separately captioned "Climate-Related Disclosure" section in the filing, after requesting relevant information from any GHG emissions attestation provider as necessary:

(1) Whether the attestation provider has a license from any licensing or accreditation body to provide assurance, and if so, identify the licensing or accreditation body, and whether the attestation provider is a member in good standing of that licensing or accreditation body;

(2) Whether the GHG emissions attestation engagement is subject to any oversight inspection program, and if so, which program (or programs); and

(3) Whether the attestation provider is subject to record-keeping requirements with respect to the work performed for the GHG emissions attestation engagement and, if so, identify the record-keeping requirements and the duration of those requirements.

(e) *Disclosure of voluntary attestation*. A registrant that is not required to include a GHG emissions attestation report pursuant to paragraph (a) of this section must disclose within the separately captioned "Climate-Related Disclosure" section in the filing the following information if the registrant's GHG emissions disclosures were subject to third-party attestation or verification:

(1) Identify the provider of such attestation or verification;

(2) Describe the attestation or verification standard used;

(3) Describe the level and scope of attestation or verification provided;

(4) Briefly describe the results of the attestation or verification;

(5) Disclose whether the third-party service provider has any other business relationships with or has provided any other professional services to the registrant that may lead to an impairment of the service provider's independence with respect to the registrant; and

(6) Disclose any oversight inspection program to which the service provider is subject (*e.g.,* the AICPA's peer review program).

§ 229.1506 (Item 1506) Targets and goals.

(a)(1) A registrant must provide disclosure pursuant to this section if it has set any targets or goals related to the reduction of GHG emissions, or any other climate-related target or goal (*e.g.*, regarding energy usage, water usage, conservation or ecosystem restoration, or revenues from low-carbon products) such as actual or anticipated regulatory requirements, market constraints, or other goals established by a climate-related treaty, law, regulation, policy, or organization.

(2) A registrant may provide the disclosure required by this section as part of its disclosure in response to §§ 229.1502 or 229.1503.

(b) If the registrant has set climate-related targets or goals, disclose the targets or goals, including, as applicable, a description of:

(1) The scope of activities and emissions included in the target;

(2) The unit of measurement, including whether the target is absolute or intensity based;

(3) The defined time horizon by which the target is intended to be achieved, and whether the time horizon is consistent with one or more goals established by a climate-related treaty, law, regulation, policy, or organization;

(4) The defined baseline time period and baseline emissions against which progress will be tracked with a consistent base year set for multiple targets;

(5) Any interim targets set by the registrant; and

(6) How the registrant intends to meet its climate-related targets or goals. For example, for a target or goal regarding net GHG emissions reduction, the discussion could include a strategy to increase energy efficiency, transition to lower carbon products, purchase carbon offsets or RECs, or engage in carbon removal and carbon storage.

(c) Disclose relevant data to indicate whether the registrant is making progress toward meeting the target or goal and how such progress has been achieved. A registrant must update this disclosure each fiscal year by describing the actions taken during the year to achieve its targets or goals.

(d) If carbon offsets or RECs have been used as part of a registrant's plan to achieve climate-related targets or goals, disclose the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECS, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs, and the cost of the offsets or RECs.

§ 229.1507 (Item 1507) Interactive data requirement.

Provide the disclosure required by this Subpart 1500 in an Interactive Data File as required by § 232.405 of this chapter (Rule 405 of Regulation S-T) in accordance with the EDGAR Filer Manual.

PART 232— REGULATION S-T—GENERAL RULES AND REGULATIONS FOR ELECTRONIC FILINGS

6. The general authority citation for part 232 continues to read as follows:

Authority: 15 U.S.C. 77c, 77f, 77g, 77h, 77j, 77s(a), 77z-3, 77sss(a), 78c(b), 78*l*, 78m, 78n, 78o(d), 78w(a), 78*ll*, 80a-6(c), 80a-8, 80a-29, 80a-30, 80a-37, 7201 et seq.; and 18 U.S.C. 1350, unless otherwise noted.

* * * * *

7. Amend §232.405 by

a. Adding paragraph (b)(1)(iii);

b. Adding paragraph (b)(3)(i)(C); and

c. Adding paragraph (b)(4) as follows:

§232.405 Interactive Data File submissions.

* * * * *

(b) * * *

(1) * * *

(iii) As applicable, the disclosure set forth in paragraph (4) of this section.

NOTE 1 TO PARAGRAPH (b)(1): It is not permissible for the Interactive Data File to present only partial face financial statements, such as by excluding comparative financial information for prior periods.

* * * * *

(3) * * *

(i) * * *

(C) The disclosure set forth in paragraph (4) of this section.

(4) An Interactive Data File must consist of the disclosure provided under 17 CFR 229 (Regulation S-K) and related provisions that is required to be tagged, including, as applicable:

(i) The climate-related information required by Subpart 1500 of Regulation S-K (§§ 229.1500 through 229.1507 of this chapter).

* * * * *

PART 239—FORMS PRESCRIBED UNDER THE SECURITIES ACT OF 1933

8. The general authority citation for part 239 continues to read as follows:

Authority: 15 U.S.C. 77c, 77f, 77g, 77h, 77j, 77s, 77z-2, 77z-3, 77sss, 78c, 78*l*, 78m,78n, 78o(d), 78o-7 note, 78u-5, 78w(a), 78*ll*, 78mm, 80a-2(a), 80a-3, 80a-8, 80a-9, 80a-10, 80a-13, 80a-24, 80a-26, 80a-29, 80a-30, and 80a-37; and sec. 107, Pub. L. 112-106, 126 Stat. 312, unless otherwise noted.

* * * * *

9. Amend Form S-1 (referenced in § 239.11) by adding Item 11(o) to Part I to read as follows:

Note: The text of Form S-1 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM S-1

* * * * *

PART I—INFORMATION REQUIRED IN PROSPECTUS

* * * * *

Item 11. Information with Respect to the Registrant.

* * * * *

(o) Information required by Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as *Climate-Related Disclosure*. Pursuant to Rule 411 (17 CFR 230.411) and General Instruction VII of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement (*e.g.*, Risk Factors, Business, Management's Discussion and Analysis, or the financial statements) or from a separately filed annual report or other periodic report into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500 through 1507 of Regulation S-K.

* * * * *

10. Amend Form S-11 (referenced in § 239.18) by adding Item 9 to Part I to read as follows:

Note: The text of Form S-11 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM S-11

* * * * *

PART I. INFORMATION REQUIRED IN PROSPECTUS

* * * * *

Item 9. Climate-related disclosure. Provide the information required by Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as *Climate-Related Disclosure*. Pursuant to Rule 411 (17 CFR 230.411) and General Instruction H of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement (*e.g.*, Risk Factors, Management's Discussion and Analysis, or the financial statements) or from a separately filed annual report or other periodic report into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500 through 1507 of Regulation S-K.

* * * * *

11. Amend Form S-4 (referenced in § 239.25) by:

a. Adding paragraph (k) to Item 14 to Part I; and

b. Adding paragraph (b)(11) to Item 17 to Part I.

The additions read as follows:

Note: The text of Form S-4 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM S-4

* * * * *

PART I

INFORMATION REQUIRED IN THE PROSPECTUS

* * * * *

Item 14. Information with Respect to Registrants Other Than S-3 Registrants.

* * * * *

(k) Information required by Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as *Climate-Related Disclosure*. Pursuant to Rule 411 (17 CFR 230.411) a registrant may incorporate by reference disclosure from other parts of the registration statement (*e.g.*, Risk Factors, Description of Business, Management's Discussion and Analysis, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Items 1500 through 1507 of Regulation S-K.

* * * * *

Item 17. Information with Respect to Companies Other Than S-3 Companies.

* * * * *

(b) * * *

(11) Information required by Items 1500-1507 of Regulation S-K (17 CFR § 229.1500 through § 229.1507), in a part of the registration statement that is separately captioned as *Climate-Related Disclosure of Company Being Acquired*.

* * * * *

12. Amend Form F-4 (referenced in § 239.34) by:

a. Adding paragraph (k) to Item 14 to Part I; and

b. Amending paragraph (3) to Item 17(b) to Part I.

The additions read as follows:

-Note: The text of Form F-4 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM F-4

* * * * *

PART I

INFORMATION REQUIRED IN THE PROSPECTUS

* * * * *

Item 14. Information With Respect to Foreign Registrants Other Than F-3 Registrants.

* * * * *

(k) Item 3.E of Form 20-F, climate-related disclosure.

* * * * *

Item 17. Information With Respect to Foreign Companies Other Than F-3 Companies.

* * * * *

(b) * * *

(3) Item 3.E of Form 20-F, climate-related disclosure;

* * * * *

PART 249—FORMS, SECURITIES EXCHANGE ACT OF 1934

13. The authority citation for part 249 continues to read as follows:

Authority: 15 U.S.C. 78a *et seq*. and 7201 *et seq*.; 12 U.S.C. 5461 *et seq*.; 18 U.S.C. 1350; Sec. 953(b) Pub. L. 111-203, 124 Stat. 1904; Sec. 102(a)(3) Pub. L. 112-106, 126 Stat. 309 (2012), Sec. 107 Pub. L. 112-106, 126 Stat. 313 (2012), Sec. 72001 Pub. L. 114-94, 129 Stat. 1312 (2015), and secs. 2 and 3 Pub. L. 116-222, 134 Stat. 1063 (2020), unless otherwise noted.

* * * * *

Section 249.220f is also issued under secs. 3(a), 202, 208, 302, 306(a), 401(a), 401(b), 406 and 407, Pub. L. 107-204, 116 Stat. 745, and secs. 2 and 3, Pub. L. 116-222, 134 Stat. 1063.

Section 249.308a is also issued under secs. 3(a) and 302, Pub. L. 107-204, 116 Stat. 745.

* * * * *

Section 249.310 is also issued under secs. 3(a), 202, 208, 302, 406 and 407, Pub. L. 107-204, 116 Stat. 745.

* * * * *

14. Amend Form 10 (referenced in § 249.210) by adding Item 3.A (“Climate-Related Disclosure”) to read as follows:

Note: The text of Form 10 does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10

* * * * *

Item 3.A Climate-Related Disclosure**.** Provide the information required by Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507), in a part of the registration statement that is separately captioned as *Climate-Related Disclosure*. Pursuant to Exchange Act Rule 12b-23 (17 CFR 240.12b-23) and General Instruction F of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement (*e.g.*, Risk Factors, Business, Management's Discussion and Analysis, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S-K.

* * * * *

15. Amend Form 20-F (referenced in § 249.220f) by adding Item 3.E ("Climate-related disclosure") to Part I to read as follows:

Note: The text of Form 20-F does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 20-F

* * * * *

PART I

* * * * *

Item 3. Key Information

* * * * *

E. Climate-related disclosure.

1. *Required disclosure.* The company must provide disclosure responsive to the topics specified in Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507) in a part of

the registration statement or annual report that is separately captioned as *Climate-Related Disclosure*.

2. *Incorporation by reference.* Pursuant to Rule 12b-23 (17 CFR 240.12b-23), the company may incorporate by reference disclosure from other parts of the registration statement or annual report (*e.g.*, Risk Factors, Information on the Company, Operating and Financial Review and Prospects, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S-K.

* * * * *

16. Amend Form 6-K (referenced in § 249.306) by adding the phrase "climate-related disclosure;" before the phrase "and any other information which the registrant deems of material importance to security holders." in the second paragraph of General Instruction B.

17. Amend Form 10-Q (referenced in § 249.308a) by adding Item 1.B ("Climate-Related disclosure") to Part II ("Other Information") to read as follows:

Note: The text of Form 10-Q does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10-Q

* * * * *

Item 1B. Climate-Related Disclosure. Disclose any material changes to the disclosures provided in response to Item 6 ("Climate-related disclosure") of Part II to the registrant's Form 10-K (17 CFR 229.310).

* * * * *

18. Amend Form 10-K (referenced in § 249.310) by:

a. Revising paragraph (1)(g) of General Instruction J ("Use of this Form by Asset-backed Issuers"); and

b. Adding Item 6 ("Climate-Related Disclosure") to Part II to read as follows:

The revision and addition read as follows:

Note: The text of Form 10-K does not, and these amendments will not, appear in the Code of Federal Regulations.

FORM 10-K

* * * * *

GENERAL INSTRUCTIONS

* * * * *

J. Use of this Form by Asset-Backed Issuers.

* * * * *

(1) * * *

(g) Item 6, Climate-Related Disclosure;

* * * * *

Part II

* * * * *

Item 6. Climate-Related Disclosure

Provide the disclosure required by Subpart 1500 of Regulation S-K (17 CFR 229.1500 through 229.1507) in a part of the annual report that is separately captioned as *Climate-Related Disclosure*. Pursuant to Rule 12b-23 (17 CFR 240.12b-23) and General Instruction G of this form, a registrant may incorporate by reference disclosure from other parts of the registration statement or annual report (*e.g.*, Risk Factors, Business, Management's Discussion and Analysis, or the financial statements) into the Climate-Related Disclosure item if it is responsive to the topics specified in Item 1500 through 1507 of Regulation S-K.

* * * * *

By the Commission.

Dated: March 21, 2022.

Vanessa A. Countryman,

Secretary.