



Via Electronic Mail
to rule-comments@sec.gov

June 10, 2021

Secretary Vanessa Countryman
U.S. Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Re: Public Input on Climate Change Disclosures

Dear Ms. Countryman:

I am pleased to submit comments in response to the Request for Public Input on Climate Change Disclosure on behalf of Ceres and our Ceres Accelerator for Sustainable Capital Markets. We also welcome President Biden's May 20, 2021, [Executive Order on Climate-Related Financial Risk](#) and the [G7 Finance Ministers and Central Bank Governors Communiqué](#) on June 5, 2021. These efforts are all important steps to protect U.S. and global capital markets from systemic risks associated with climate change and the energy transition. The Securities and Exchange Commission's (SEC or Commission) commitment to enhance corporate disclosure on climate risks will be critical to the work of the Administration and the Financial Stability Oversight Council to mitigate climate-related financial and economic risk.

Background on Ceres and Our Disclosure Expertise

Ceres is a nonprofit organization that has worked for over 30 years on climate change with leading global investors and companies.¹ From our founding in 1989,² disclosure has been at the core of our work. We create tools and standards that companies can use to meet mounting investor and public expectations for improved climate change and sustainability disclosure. In 2002, we launched the [Global Reporting Initiative](#) (GRI) – the most widely used standard worldwide for sustainability reporting.³ Ceres also leads the [Investor Network on Climate Risk and Sustainability](#), which comprises almost 200 investors that collectively manage over \$37 trillion in assets under management, working with them on improving the disclosure and management of climate risk, among other financial risks.

On behalf of this network, Ceres has engaged the Commission since 2004 to improve climate change disclosure in financial filings. A petition from Ceres and our investor partners led to the SEC's 2010 climate disclosure guidance. In 2019, we established the [Ceres Accelerator for Sustainable Capital Markets](#) to expand this work to transform the practices and policies that govern capital markets in order

¹ See Ceres, *The 21st Century Corporation: The Ceres Roadmap for Sustainability* (Mar. 2010), at 35.

² See Ceres, *The Ceres Principles*.

³ See Global Reporting Initiative, *Sustainability reporting is growing, with GRI the global common language* (Dec. 1, 2020). Approximately three-quarters of the G250 and two-thirds of the N100 now use GRI. The G250 refers to the world's 250 largest companies by revenue. The N100 are the largest 100 companies by revenue in each of 45 countries – a total of 4500 companies worldwide.

to reduce the worst financial impacts of the climate crisis. The Accelerator is an initiative that spurs capital market influencers to act on climate change as a systemic financial risk—driving the large-scale behavior and systems change needed to achieve a just and sustainable future and a net zero emissions economy.

Underpinning this work is Ceres’ experience as a founding partner of several initiatives where climate change disclosure is a core element. These include, among others, the [Climate Disclosure Standards Board](#) (CDSB), an international consortium of business and NGOs working to align the global corporate reporting to equate natural capital with financial capital by offering companies a framework for reporting environmental information with the same rigor as financial information. We also co-founded [Climate Action 100+](#), an investor-led initiative with more than 570 investors, responsible for over \$54 trillion in assets under management. Designed by investors for investors, the initiative works to ensure the world’s largest corporate greenhouse gas emitters take necessary action on climate change by improving climate governance, cutting greenhouse gas (GHG) emissions and strengthening climate-related financial disclosures.

Ceres is also a founding partner of the [Investor Agenda](#), a comprehensive leadership agenda on the climate crisis focused on accelerating investor action for a net zero emissions economy, and the [Net Zero Asset Managers Initiative](#), a group of 87 firms representing \$37 trillion in assets under management that are setting 2050 decarbonization commitments and interim targets, and agreed to publish annual disclosure following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Since 2016, Ceres and CookESG Research have provided the public excerpts of climate change-related disclosures from thousands of publicly traded companies, covering SEC filings from 2009 to the present as a public resource.⁴

Through this work, Ceres has developed a deep understanding of the significant gaps, weaknesses and inconsistencies in the current corporate disclosure regime, and the burden faced by investors in making investment decisions based on often fragmented and incomparable data. Corporate disclosures often do not adequately capture important and systemic financial climate risks that issuers face, concealing major vulnerabilities in the global financial system and preventing effective risk management and efficient capital allocation.

Climate Change Poses Systemic Risks

We applaud the SEC’s initiatives to evaluate its rules to facilitate the disclosure of consistent, comparable, and reliable information on climate change. The federal securities laws are based on the enduring principle that regulation of the capital markets is necessary to avoid “national emergencies, which produce widespread unemployment and the dislocation of trade, transportation, and industry.”⁵ We believe that the SEC must view climate change risk through this lens when considering how to improve disclosure and what other steps are needed to meet the urgency and scale of the challenge.

Climate change presents a profound, systemic risk to U.S. capital markets. We are already experiencing the effects of climate change and those effects will continue to worsen. Also, efforts to achieve

⁴ Ceres and CookESG Research, [SEC Sustainability Disclosure Search Tool](#). The tool also provides additional search tools for finding companies’ disclosures about risks related to human and workers’ rights, carbon asset risks, water, and hydraulic fracturing.

⁵ Securities Exchange Act of 1934, Section 2 (“Necessity for Regulation”).

significant mitigation of GHG emissions are underway in many nations, and these policies are likely to affect businesses and financial markets in profound ways, such as changing business models and shifting capital flows away from carbon-intensive activities.

The risks and impacts of the climate crisis include physical risks to real assets from climate-fueled weather events and litigation risks. The transition to a net zero economy poses opportunities in virtually every sector. All of these changes can combine in unexpected and correlated ways, with serious, disruptive impacts on asset valuations, global financial markets and global economic stability. Furthermore, climate change poses a variety of material risks to companies of all sizes in all industries across the nation. The costs of inaction to companies, investors, workers and savers could be dire in the medium and long term, and many severe impacts, such as those from floods, fires, droughts and hurricanes, are already being incurred in the short term.

Climate change risks permeate all aspects of capital markets, much like cybersecurity risks and the coronavirus pandemic, posing grave threats to investors, our capital markets, and our country. Similarly, climate change risks do not differentiate based on issuer size or sector. Because climate change already poses material risks to most industries⁶, and as a systemic risk it threatens all industries, we believe that all publicly traded companies should be required to disclose climate change risks.⁷

The SEC website states, "For more than 85 years since our founding at the height of the Great Depression, we have stayed true to our mission of protecting investors, maintaining fair, orderly, and efficient markets, and facilitating capital formation."⁸ As we recognize the 87th anniversary of the founding of the SEC, the climate crisis poses one of the greatest threats the SEC has faced to all aspects of this mission. Consistent, comparable climate change disclosure is a key step toward ensuring the SEC can continue to fulfill its vital mission.

Issuers and Financial Regulators are Responding to Climate Risk

Companies and other financial market participants have publicly committed to contribute to the mitigation of climate change in various ways, including by reducing GHG emissions in their operations and in their products; investing in new research and development, technology and property, plant and equipment; and exiting or divesting from other assets and business lines. A range of initiatives document these commitments, which in some cases include the production of a plan for actions to respond to climate risks. Even companies that have not made such commitments have been impacted

⁶ Sustainability Accounting Standards Board, [Climate Risk Technical Bulletin 2021 Edition](#) (April 12, 2021) at 8, finding that 68 out of 77 industries in SASB's industry classification system "are significantly affected in some way by climate risk." . In addition, a leading coalition of investors takes the position that climate change poses material risks to all companies. See Institutional Investors Group on Climate Change (IIGCC) [response](#) to UK Department for Business, Energy & Industrial Strategy (BEIS) consultation on mandatory climate-related financial disclosures (May 5, 2021) at 1, stating, "IIGCC's position is that climate change presents material risks to all companies, irrespective of size . . . ". IIGCC is the leading European membership body, with 300 members representing €37 trillion AUM, enabling the European investment community to drive progress by 2030 towards a net zero and resilient future.

⁷ See SEC Commissioner Allison Herren Lee, [Living in a Material World: Myths and Misconceptions about "Materiality"](#) (May 24, 2021), stating that, "Regulation S-K has, from the outset, required periodic reports to include information that is important to investors but may or may not be material in every respect to every company making the disclosure." In this speech, Commissioner Lee cited examples of such requirements: disclosures of related party transactions, environmental proceedings, share repurchases, and executive compensation.

⁸ Securities and Exchange Commission, [What we do](#).

both by the physical effects of climate change (extreme weather, floods, drought, etc.) as well as by the global transition to a lower-carbon economic system, through intentional shifts in consumer preferences, access to and pricing of capital for carbon-intensive endeavors, and local and national policy actions and regulation.

Larry Fink, CEO of BlackRock, the world's largest asset manager, warned in BlackRock's 2021 annual letter sent to CEOs that "[t]here is no company whose business model won't be profoundly affected by the transition to a net zero economy."⁹ Asset owners, asset managers, and other financial institutions make investment, voting and lending decisions based on companies' preparedness for climate change and the energy transition, measure companies' progress, and hold corporate boards and management accountable for skillful management through the economic transition.¹⁰ There is nothing new or uniquely unmeasurable about these stewardship goals.

In a parallel and fast-moving trend, U.S. state and federal financial regulators and regulators worldwide are taking action on climate risk.¹¹ Prudential regulators are taking steps to assess the safety and soundness of regulated entities against climate risk, including U.S. listed issuers. Central banks around the globe, including our own Federal Reserve, have called for using all available tools to address a financial crisis that would attend a climate-change driven collapse in asset values and businesses, including "working closely with the financial sector on disclosure of carbon-intensive exposure to assess potential financial stability risks."¹² Economists and financial leaders say the scale of the losses from climate change could eclipse the subprime mortgage securities meltdown that triggered bank failures and, ultimately, a deep global recession.¹³ The dramatic scale of these risks has been known and action is now more urgent. BlackRock's CEO also sent a warning to CEOs in their 2020 annual letter, writing that "[e]ven if only a fraction of the projected impacts is realized, this is a much more structural, long-term crisis [than the other financial crises and challenges of the last 40 years]."¹⁴

In this context, the Commission plays a critical role to address the resounding chorus from regulators around the world lamenting the current weaknesses in climate risk data, and calling for more consistent and high quality disclosure. Among other benefits, better climate disclosures would enable financial regulators to more efficiently address macro and microprudential risks and take actions to prevent or address climate-related financial shocks or "subsystemic" shocks¹⁵ that could ultimately affect issuers,

⁹ Pilita Clark, *Too many boardrooms are climate incompetent*, Financial Times (Jan. 30, 2021).

¹⁰ See, e.g., Climate Action 100+ [2020 Progress Report](#) at 11, discussing companies' progress on setting 2050 net zero, short term and medium term emissions targets, and the percentage of companies that set Scope 3 emissions targets.

¹¹ Veena Ramani, Ceres, [Turning up the Heat: The need for urgent action by US financial regulators in addressing climate risk](#), (April 2021) at 16, 18-37.

¹² BIS, *The Green Swan* (Jan. 2020) at 2 ("There is an array of actions to be consistently implemented. The most obvious ones are the need for carbon pricing and for systematic disclosure of climate-related risks by the private sector.").

¹³ Simon Dietz, Alex Bowen, Charlie Dixon & Philip Gradwell, *'Climate value at risk' of global financial assets*, Nature Climate Change (Apr. 4, 2016).

¹⁴ Larry Fink letter to CEOs, BlackRock, *A fundamental reshaping of finance*.

¹⁵ See Commissioner Rostin Behnam, Sponsor; Bob Litterman, Chairman, [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](#) (September 9, 2020) at 27, stating, "Climate-related risks may well produce "sub-systemic" shocks, which are defined here as those that affect financial markets or institutions or a particular sector, asset class, or region, but without threatening the stability of the financial system as a whole. Such shocks are especially relevant for the United States, given its size and its financial system, which includes

investors and shareholders. Conversely, climate change offers dramatic opportunities for innovation, investment and growth, and the Commission has a statutory mandate to identify, facilitate and enable the associated capital formation emerging from those opportunities.¹⁶

SEC Should Mandate “Decision-useful”, Consistent and Comparable Climate Risk Disclosure

Since the SEC issued interpretive guidance on climate change disclosure in 2010, the volume of climate change disclosure has increased, but the quality and usefulness to investors remains insufficient. Investors find disclosures lacking for several reasons. Many registrants are not fully following the SEC’s 2010 guidance on climate change disclosure by disclosing material risks in a manner consistent with Item 503(c) of Regulation S-K, which requires a clear identification of risk and its impacts that are particular to the registrant, or Item 303 of Regulation S-K, which requires that trends or events that are likely to affect the company be reviewed in the Management’s Discussion & Analysis. In the past, enforcement has been limited.¹⁷ We are, therefore, encouraged by the SEC’s formation of a Climate and ESG Task Force in the Division of Enforcement.¹⁸

Additionally, since the release of the interpretive guidance in 2010, changes have occurred that suggest rulemaking is needed. The understanding of the financial impacts of climate change on companies, investment portfolios and financial markets writ large has significantly evolved. Climate science and our understanding of climate change has advanced, leading to more certainty about the types and location of climate events, and their severity, under different warming scenarios. Investor expectations of the quality of disclosure have been strengthened due to the multiple, climate-driven loss events they have endured, as well as the work of governments around the world, the TCFD, voluntary disclosure frameworks, academic contributions, and many other initiatives. We call on the SEC to recognize this evolution and mandate “decision-useful”, consistent and comparable climate risk disclosure through its rulemaking authority.

Climate-related disclosure will create significant public benefits by giving investors and companies the tools they need to align their investments and strategies with the transition to a net zero economy. Investors need access to consistent, comparable and reliable information at scale, so that they can allocate capital in a manner that reduces risk and navigates the path to a net zero future with fewer

thousands of financial institutions, many regulated at the state level. . . . Over time, repeated sub-systemic shocks could lead to the gradual accumulation of stress in the U.S. financial system and to escalating economic and financial losses—a systemic crisis in slow motion.”

¹⁶ For example, in a 2021 study of over 330 financial institutions with over \$100 trillion in combined assets, CDP found that institutions surveyed see “opportunities for returns on financing the transition to a low carbon, deforestation free, water secure future.” Specifically, 76% of those surveyed saw “opportunities in offering sustainable finance products and services, including opportunities for sustainability-linked loans, green and transition bonds, sustainable investment funds and insurance solutions – with potential financial impact up to US\$2.9 trillion. There are indications these opportunities could be realized, with potential impact outweighing the cost to pursue for most opportunities.” CDP, [The Time To Green Finance: CDP Financial Services Disclosure Report 2020](#) (2020) at 3.

¹⁷ The scale and breadth of the risk that is not being adequately assessed and disclosed undermines the SEC’s mandate and supports mandatory disclosure, as well as the investments in increased and immediate climate guidance enforcement scrutiny. In the financial services sector alone, CDP found that “49% of [over 330 surveyed] financial institutions indicate they do not conduct any analysis of how their portfolio impacts the climate at all. Only 25% of disclosing financial institutions report their financed emissions – 84 financial institutions worth US\$27 trillion of assets. For those 25%, on average, reported financed emissions are over 700x larger than reported operational emissions.” Id.

¹⁸ SEC, Press Release, [SEC Announces Enforcement Task Force Focused on Climate and ESG Issues](#) (March 4, 2021)

financial shocks or disruptions. To function effectively, capital markets need comprehensive, decision-useful data from enterprises facing material climate change risks.

Robust climate disclosure is also needed to meet the full measure of the climate crisis by providing transparency as to the impact of market responses to it. This includes impacts on the workforce, communities, human rights implications and the connection between climate, water, food and forests. The U.S. Congress and President Roosevelt established the Commission 87 years ago to address just such national emergencies through the power of capital markets.

Recommendations

Our response is organized into two parts. Part I sets forth our recommendations on a climate change disclosure rulemaking, and Part II discusses related rulemakings and processes. These recommendations include amendments to SEC rules and mechanisms to obtain the expertise and advice that will help the SEC keep its rules and guidance up to date. Appendix A sets forth our detailed responses to the questions in the Request for Public Input. Appendix B provides examples of Ceres reports focused on climate change and sustainability risks, opportunities and disclosures. Appendix C provides examples of organizational and individual support for the TCFD's recommendations.

These comments and recommendations are based on Ceres' deep experience on climate and ESG disclosure that informs capital markets. Our views are informed by several significant reports we have issued on the economic impacts of climate change,¹⁹ corporate best practice in addressing climate risk, and challenges investors have faced working with poor and inconsistent corporate disclosure. Our submission also draws from work via Climate Action 100+ to develop a disclosure assessment framework with indicators that evaluate public and self-disclosed data from companies, including company annual reports, sustainability reports, press releases, and CDP disclosures.²⁰ Our submission also draws significantly from the seminal analysis of the Commodity Futures Trading Commission's Subcommittee on Climate-Related Market Risk of the Market Risk Advisory Committee. The Subcommittee brought together 34 diverse financial market participants that were unanimous in voting to approve the analysis and 53 recommendations in the 2020 report, [*Managing Climate Risk In The U.S. Financial System*](#).²¹ I proudly served on the subcommittee, and I encourage the SEC to make full use of its findings.

Part I: Recommendations for Climate Disclosure Rulemaking

Today's investors and lenders seek to track absolute GHG emissions to measure and hold companies accountable for promised reductions, in order to arrest both specific and systemic collapses in asset values and businesses.²² They seek clarity as to whether management's capital expenditures are

¹⁹ For a list of relevant Ceres reports, see Appendix B.

²⁰ See Climate Action 100+, Net-Zero Company Benchmark, [*Framework and Methodologies*](#) (released March 2021). Companies are assessed against ten indicators: (1) net zero GHG Emissions by 2050 (or sooner) ambition, (2) long-term (2036-2050) GHG reduction target(s), (3) medium-term (2026-2035) GHG reduction target(s), (4) short-term (up to 2025) GHG reduction target(s), (5) decarbonisation strategy, (6) capital allocation alignment, (7) climate policy engagement, (8) Climate Governance, (9) Just Transition (*not assessed for 2021*), and (10) disclosures to implement the 11 recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures.

²¹ [*Managing Climate Risk in the U.S. Financial System*](#) (September 2020) at 123-135.

²² The banking industry's Poseidon Principles initiative demonstrates this demand. Evidence from the first year of the Poseidon Principles, a climate alignment framework for maritime shipping finance, demonstrates how more robust emissions disclosures can underpin significant changes to the cost of capital. The Poseidon Principles

consistent with announced climate strategies, both in substance and magnitude. They want an apples-to-apples comparison of how companies plan to contribute to and survive in a net zero economy. And they want honesty about how net zero commitments are being met. They seek this information both to protect the capital they have invested in individual companies as well as to protect their portfolios overall from the systemic risks of climate change.²³ These risks have motivated the formation of coalitions such as Climate Action 100+, the Investor Agenda, the Partnership for Carbon Accounting Financials and many other initiatives, which have developed extensive governance, monitoring and measurement techniques that can and should be adapted into regulation in the public interest.²⁴

Both companies and investors have made significant investments in voluntary climate-related disclosure over the years, and Ceres has been at the forefront of working with companies and investors to accelerate those efforts in light of the significant risks to our capital markets and society presented by climate change. Unfortunately, on the whole, the disclosures simply are not comparable, consistent or decision-useful, in the face of the climate crisis. The problem is the absence of a mechanism to enforce those voluntary disclosures in a rigorous and reliable way and the concomitant variability in depth, completeness and accuracy. Voluntary disclosure is not giving market participants enough information to move capital fast enough to stay ahead of the climate crisis.

Climate change is a systemic risk. The lack of information on this systemic risk is a market failure. Given this failure, investors are now bearing the high costs of finding and collecting climate-risk information, in order to take advantage of investment opportunities in the energy transition and as well as protect investments, especially on behalf of vulnerable investors such as pensioners and other individual savers, on whose faith our markets and economic welfare depend.

Quantitative, comparable, company-specific disclosure is imperative for market participants to judge and price climate risk as well as to hold companies and investors accountable for their claimed contributions to the achievement of global climate goals. Investors need the SEC to mandate and enforce material climate-related disclosures that are informative, rigorous, consistent and comparable across companies and markets, and which do not mislead investors or the public.

We believe that climate change disclosure rules from the SEC should, at minimum, include the following 10 elements, which are discussed in greater detail in Appendix A:

1. **TCFD:** The SEC should **incorporate the 11 recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD) into Regulation S-K**. These recommendations address companies' climate governance, strategy (including scenario

established reporting requirements for the climate impacts of ship lending portfolios according to a common methodology. In the 2020 *Poseidon Principles Annual Disclosure Report*, banking signatories noted that the framework contributed to overcoming data barriers, enabling them to better identify portfolio emissions "hot spots" and drivers.

²³ See generally Jon Lukomnik and James P. Hawley, *Moving Beyond Modern Portfolio Theory* (Routledge 2021).

²⁴ See *The Investor Agenda*, a common leadership agenda on the climate crisis that is unifying, comprehensive, and focused on accelerating investor action for a net zero emissions economy developed by seven major groups working with investors, including Ceres, the Asia Investor Group on Climate Change, CDP, the Institutional Investors Group on Climate Change, IIGCC, the United Nations Principles for Responsible Investment and the UN Environmental Programme Finance Initiative. See also *Partnership for Carbon Accounting Financials*, a global partnership of 118 financial institutions that is developing and implementing a rigorous approach to measuring and reporting on emissions associated with institutions' investments, loans and products.

planning), risk management, and metrics and targets and have been endorsed by over 2,000 companies and investors globally. In October 2020, the Group of Thirty Working Group on Climate Change and Finance, co-chaired by Janet Yellen, found that climate disclosures “remain far from the scale” necessary for investors to “systematically channel investment to sustainable and resilient technologies and companies” and called on all national securities regulators to make the full set of TCFD disclosures mandatory by 2023.²⁵ There is already significant overlap between the TCFD recommendations and Regulation S-K,²⁶ but without rulemaking, the SEC’s disclosure expectations will remain unclear. Explicitly integrating the TCFD recommendations into Regulation S-K will improve consistency and clarity in disclosure.²⁷

2. **Governance and Strategy:** Disclosure rules should provide insights into companies’ climate risk exposure, strategies and scenario planning. The SEC currently requires that companies disclose how their board administers its risk oversight function and the effect this has on the board’s leadership structure, and has, for example, highlighted the importance of disclosure of the board’s oversight of cybersecurity risks.²⁸ **In line with TCFD recommendations, the Commission should consider a similar, specific requirement as to enhanced disclosure of board oversight of**

²⁵ G30 Working Group on Climate Change and Finance, [Mainstreaming the Transition to a Net-zero Economy](#) (October 2020) at xvi. The We Mean Business Coalition has also [called on international ministers](#) to make the TCFD’s recommended disclosures mandatory.

²⁶ For example, Item 303 of Regulation S-K requires that annual reports include management’s discussion and analysis of the company’s financial condition and results of operation (MD&A). MD&A must address the company’s liquidity, capital resources, and results of operations as well as “such other information that the company believes to be necessary to an understanding of its financial condition, changes in the financial condition and results of operations.” Item 303 also requires that the MD&A section “focus specifically on material events and uncertainties known to management that would cause reported financial information not to be necessarily indicative of future operating results.”

Climate and other ESG risks are just the sort of risks that should be discussed in MD&A, yet investors struggle to obtain information about them either in the annual report or voluntary sustainability reports. E.g., see Jamie Smyth, [Australian Mine Contractor Fails to Obtain Insurance on ESG Concerns](#), Fin. Times (May 13, 2021); [Lloyd’s Steps Back from Coal in First Climate Policy](#), Reuters (Dec. 16, 2020) (announcing that the Lloyd’s Corporation and its members will end new insurance cover for oil sands and new Arctic energy exploration activities as well as thermal coal-fired power plants and thermal coal mines and phase out the renewal of existing cover); Kevin Crowley, [U.S. Oil Majors Downgraded by S&P on Climate Risk, Earnings](#), Bloomberg (Feb. 11, 2021) (citing “growing risks from energy transition due to climate change and carbon/GHG emissions, weak industry profitability and greater expected volatility in hydrocarbon fundamentals”).

Moreover, numerous banks and other financial institutions have pledged to reduce the emissions associated with their loan and investment portfolios, or so-called financed emissions by their corporate clients, including oil and gas companies. Many banks have restricted financing for specific kinds of projects, such as projects involving oil sands or other unconventional exploration. The number and scope of ambition of such pledges is growing rapidly. In September 2020, Morgan Stanley announced it would reach net zero financed emissions by 2050, [followed by HSBC, JPMorgan Chase and Bank of America and Wells Fargo](#). To make good on these pledges, banks have begun to estimate emissions, demand reporting from clients and set reduction targets for them. Companies that are not equipped to deliver both reporting and reductions risk both higher financing costs and losing access to financing.

²⁷ Below we propose additional recommendations that align with TCFD disclosure topics and provide the additional precision necessary in order to address investor needs. We discuss a specific recommendation on internal GHG emissions pricing and scenario analysis – related to two of the TCFD’s 11 recommendations (metrics and scenario analysis) – below in Items 3 and 7.

²⁸ See Item 407(h) of Regulation S-K, Item 7(b) of Schedule 14A and Securities and Exchange Commission, [Commission Statement and Guidance on Public Company Cybersecurity Disclosures](#) (February 26, 2018).

climate risk based on best practice.²⁹ This disclosure should include discussion of the role of the audit committee in (1) overseeing the financial reporting process in a way that ensures that the company's announced climate commitments and strategies are clearly reflected throughout the financial statements, (2) ensuring that the company's announced climate commitments and strategies are built into the company's risks and controls systems, and (3) setting the scope of and overseeing the audit in a manner appropriate to ensure the rigor and reliability of climate-related financial disclosures.³⁰

3. **Metrics and Targets:** The SEC should **require disclosure, assured by a third party, of progress on announced science-based targets and other corporate climate commitments**, in the form of clear, periodic updates on the status of and progress towards meeting those commitments.³¹ To their credit, many companies have announced climate strategies, including net zero ambitions for their operations and products, and reported on their progress towards meeting targets. These announcements may be the basis for investment and/or voting decisions by investors and investment managers. Yet investors lack transparency as to whether and how companies follow through on their announcements. Many companies disclose progress on commitments in voluntary reporting, but it can be unclear what measures the company is using as well as whether the methodology to track the measure is consistent from period to period. Disclosure of voluntary commitments and progress in a supplemental SEC schedule will help make the commitments credible and allow investors to reliably measure progress.

We recommend the Commission carefully consider how carbon offsets should be disclosed.³² Also, most science-based targets do not count carbon offsets. Along with the proposed disclosure of companies' climate metrics and targets, companies should disclose the role of carbon offsets in their targets and/or claims of achieving milestones.

²⁹ Fundamentally, effective corporate climate risk management is about integrating an accurate assessment of risk exposure into plans and performance metrics, not now, but in the future. Robust disclosure of the governance of climate risks by corporate boards as well as senior leadership and the broader workforce is essential to communicate to the markets the company's approach, to allow investors to assess and compare the resilience of corporate strategies to potential risks. Best practice disclosures include, for example, descriptions of: the full board's role in climate risk oversight; how the board oversees climate key risks, including board structure and board expertise where appropriate; how the board receives training on key climate risks, including the topic and leaders of the training; the board's approach to allocating climate risk oversight; the nature and frequency of reporting to the board on ESG risks, e.g., who from management presents; which committees receive reports and whether the entire board receives reports; and how climate risk discussions are integrated within other management discussions on strategy, business unit performance or other strategic and tactical functions. See Ceres, [Running the Risk: How Corporate Boards Can Oversee Environmental, Social and Governance \(ESG\) Issues](#), November 2019; See also Ceres, Roadmap 2030, ["Board Oversight"](#)

³⁰ See Ceres, *Lifting the Veil* (May 2021) at 17.

³¹ See Ceres, [Ceres Roadmap 2030](#) (Oct. 7, 2020). The Ceres Roadmap 2030 challenges companies to create and maintain disclosures that are goal- and metric-driven, consistent, comparable and verifiable, decision-useful, accessible and stakeholder relevant.

³² Few companies have disclosed the extent to which their net zero ambitions rely on carbon credit purchases or action outside of their value chains (i.e. offsetting emissions) versus avoiding or reducing emissions within their own value chains. A lack of standards for net zero targets makes it difficult to assess the legitimacy of these commitments in terms of their contribution to the global goal to limit warming to 1.5 °C. Disclosure is needed to enable assessment of these targets. See Ceres and IIFCC - Institutional Investors Group on Climate Change, [The Role Of Natural Climate Solutions In Corporate Climate Commitments A Brief For Investors](#), (May 2021) at 11, 14 and 16.

4. **GHG Emissions:** The SEC should **require tabular disclosure of a company's estimated Scope 1, 2 and 3 greenhouse gas (GHG) emissions, by category, assured at the reasonable assurance level, based on the GHG Protocol's** well-accepted [framework](#) for measuring and reporting emissions, which covers direct and indirect emissions and the percentage of carbon, methane and other gases.³³ [Item 303 of Regulation S-K](#) already requires that the Management's Discussion and Analysis (MD&A) in annual reports address the company's liquidity, capital resources, and results of operations as well as "such other information that the company believes to be necessary to an understanding of its financial condition, changes in the financial condition and results of operations." Emissions reporting, including trends over time, is critical to investors' understanding of the quality of a company's earnings in the face of climate change and the energy transition as well as to an understanding of a company's liquidity and capital resources, especially in light of the climate commitments of financial institutions to restrict financing of emissions-intensive activities.

Many companies voluntarily report some information on emissions, but reporting is often incomplete and disconnected from securities disclosure. Because investors have signaled how important emissions disclosures are, some companies obtain limited assurance over their disclosures. But the absence of the discipline of mandatory requirements, backed up by regulatory monitoring and enforcement, has resulted in inconsistent assurance quality. The SEC should require that GHG emissions disclosure be in a supplemental schedule to the financial statements and be audited according to rigorous standards established by the Public Company Accounting Oversight Board at the reasonable assurance level.³⁴

5. **Internal GHG emissions pricing:** The SEC should **require companies to disclose whether, and if so, how they use internal GHG emissions pricing**, including the price they use. The TCFD identifies internal emissions pricing as a fundamental strategy for assessing climate-related risks and opportunities. An internal carbon price can assist companies in steering capital expenditures, research and design, and other financing decisions toward projects with reduced emissions (i.e., shadow pricing).³⁵ An internal carbon price can also be an effective tool to create

³³ For example, the Partnership for Carbon Accounting Financial's [Global GHG Accounting and Reporting Standard for the Financial Industry](#) (the Standard) uses the Greenhouse Gas Protocol. The Standard currently covers six asset classes: listed equity and corporate bonds, business loans and unlisted equity, project finance, commercial real estate, mortgages and motor vehicle loans. Within the next one to two years, the Standard will expand to cover emission removals, sovereign debt, capital market instruments and green bonds, adapting to meet the needs of the partnership's rapidly growing member base. Unfortunately, today, there are often variations in the quality of source data, from reported emissions to information required for estimated emissions calculations. Thus the Standard includes directions for scoring data quality. This is a problematic and inefficient state of affairs, which the SEC can remedy, through rulemaking, to reduce systemic climate change risks to U.S. capital markets.

³⁴ Transparency as to both direct and indirect emissions, including supply chain emissions, is important. Emerging research shows that multi-national companies headquartered in highly regulated jurisdictions tend to outsource their emissions to more loosely regulated jurisdictions. It would thwart protection of capital markets against the systemic risks of climate change and the energy transition if the U.S.'s disclosure regime allowed companies to push emissions "off the books" to their supply chains. See Itzak Ben-David, Yeejin Yang, Stefanie Kleimeier, Michael Viehs, [Exporting Pollution: Where Do Multinationals Emit CO₂?](#), European Center for Sustainable Finance working paper (August 2020). This is a reason why it will be so important to have a rigorous system for monitoring supply chain emissions, even more so when there are more effective Scope 1 and 2 emissions disclosure requirements.

³⁵ According to CDP data, there is a "clear correlation between the companies putting a price on carbon and those taking other strategic actions to integrate climate change issues into their business strategy as a means to reduce

incentives to reduce GHG emissions, by charging projects and groups within a company for their emissions (i.e., internal fees).³⁶ In this way, internal pricing helps companies take long-run, climate-related risks into account in decisions that otherwise might naturally focus on short-term returns.

The good news is that many companies voluntarily disclose that they use internal pricing. But it is difficult for investors to assess the strength or validity of this practice without disclosure of price, methodology, the extent of its use, and the type and scope of GHG emissions covered (e.g., direct emissions and/or emissions in the full value chain from supplier to products). The SEC should mandate that companies that have announced they use internal emissions pricing provide these disclosures.

6. **Capex:** The SEC should amend Regulation S-X to **require companies to disclose a breakdown of current period and planned capital expenditures** in a note to their financial statements, to show the portion of investments attributable to addressing (a) transition risks and opportunities, and (b) adaptation to and/or mitigation of physical risks associated with climate change. This disclosure is necessary to validate companies' investments in net zero and other climate mitigation strategies.³⁷ It is also necessary for capital market actors to be able to discern investment opportunities that can efficiently steer capital toward the most promising and innovative solutions to the climate crisis. Another reason is so it will be covered by the audits of internal control over financial reporting and the financial statements.
7. **Scenario Analysis:** The SEC should **require disclosure of a net zero scenario analysis** that standardizes disclosure related to the parameters, assumptions, analytical choices and impacts used in the analysis. This analysis should be assured at the reasonable assurance level and provided in a supplemental schedule to the financial statements. The SEC should draw from the TCFD's resource of "Key Considerations: Parameters, Assumptions, Analytical Choices, and

risk." See CDP, Putting a Price on Carbon: The state of internal carbon pricing by corporates globally (April 2021) at 14.

³⁶ E.g., Microsoft has reported that it uses internal carbon pricing as a way of "charging business groups based on the emissions they generate . . . to help drive efficiency initiatives and innovation across [its] business. The carbon fee affects investment decisions by providing an incentive, the financial justification, and in some cases the funds for climate-related energy and technology innovation." See *Id.* at 14.

³⁷ SASB has also called for disclosure of the "amount invested in renewable energy, revenue generated by renewable energy sales" as well as a "discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets." See SASB, Oil & Gas, Exploration & Production, at 7.

Impacts” in its scenario analysis guidance.^{38 39} A model for the mandatory schedule could be the existing optional sensitivity table provided for in Item 1202(b) of Regulation S-K, as a supplement to the mandatory standard measure for oil and gas reserves.⁴⁰ The new schedule will allow investors to compare companies’ financial position and results under standardized net zero assumptions and discern whether and how much of the company’s current assets could become stranded as the economy decarbonizes. It should apply to all companies that file with the SEC and be assured as part of the financial statement audit. The Commission should consider producing guidance on the standard reference scenarios that issuers should employ.⁴¹ The Commission should assess investor interest in disclosures related to specific scenarios such as the influential International Energy Agency “Net Zero by 2050” scenario.⁴²

Enhanced transparency through scenario analysis disclosure will reduce market uncertainty. For companies that can demonstrate the resilience of their strategies in a net zero environment, such disclosure will improve access to capital to pursue those strategies. Today, while many companies claim to perform scenario analysis, disclosures about such analyses tend to be superficial. There is no mechanism to compare results because companies use different scenarios and different (often undisclosed) assumptions.⁴³ Without transparency as to the assumptions used, there is little basis for confidence in either the quality of the company’s

³⁸ TCFD, [Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities](#) (June 2017) at 8-9: “Organizations are encouraged to disclose the approach used for selecting scenarios used as well as the underlying assumptions for each scenario regarding how a particular pathway might develop (e.g., emergence and deployment of key technologies, policy developments and timing, geopolitical environment around climate policies). This information will be important for an organization to disclose and discuss, including the sensitivity of various assumptions to changes in key parameters such as carbon prices, input prices, customer preferences, etc., so that investors and other stakeholders have a clear understanding of the scenario process— not only the outcomes each scenario describes, but the pathway envisioned by an organization that leads to that outcome (i.e., the how and why of those outcomes). Transparency around key parameters, assumptions, and analytical choices will help to support comparability of results between different scenarios used by an organization and across organizations. In turn, this will support the evaluation, by analysts and investors, of the robustness of organizations’ strategies across a range of plausible impacts, thereby supporting better risk and capital allocation decisions.”

³⁹ In line with TCFD guidance, the Commission might consider approaches to accommodate varying levels of issuer experience with climate scenario analysis. The TCFD guidance states, “Organizations just beginning to use scenario analysis may choose to start with qualitative scenario narratives or storylines to help management explore the potential range of climate change implications for the organization. As an organization gains experience with qualitative scenario analysis, the scenarios and associated analysis of development paths can use quantitative information to illustrate potential pathways and outcomes. For organizations with significant experience conducting scenario analysis, greater rigor and sophistication in the use of data sets and quantitative models and analysis may be warranted.” Id. at 4.

⁴⁰ In any event, this optional sensitivity analysis should be retooled for the oil and gas industry to be mandatory and provide for at least one standardized set of potential net zero commodity and carbon price assumptions.

⁴¹ TCFD reviews several standard reference scenarios typically employed for such analysis in its Technical Supplement to guide implementation of its recommendations. TCFD 2017 [Technical Supplement](#) at 15-25. For example, it states that “The most well-known and widely used and reviewed scenarios for transition to a low carbon economy are those prepared by the IEA. A majority of analyses conducted by academic and industry analysts are built upon or compared with the IEA scenarios.” Id. at 15.

⁴² International Energy Agency, [Net Zero by 2050: A Roadmap for the Global Energy Sector](#), May 2021

⁴³ See Erik Landry, Research Director and Primary Author, et. al., Massachusetts Institute of Technology, Office of the Vice President for Research, [Climate-Related Financial Disclosures: The Use of Scenarios](#) (Nov. 2019) at 23-25.

earnings today or the company's ability to thrive, or even survive, in a net zero environment.⁴⁴ The need for robust, standardized scenario analysis is most acute with respect to companies in emissions-intensive industries. But the climate crisis will affect all companies in some manner, and thus disclosure of scenario analysis should be required of all issuers, possibly in phases, in order to enhance the quality of impairment testing and bolster confidence in asset values in the face of the crisis.

8. **Industry metrics and guidance:** The SEC should **update and expand its industry-specific disclosure requirements to incorporate material, industry-specific climate-related metrics.** Those requirements include rules as well as Securities Act and Exchange Act [Industry Guides](#). Some amendments to the SEC's existing industry-focused disclosure requirements can and should be made immediately. For example, as discussed above, Items 1200-1207 of Regulation S-K require specific disclosure by registrants engaged in oil and gas producing activities. Item 1202 requires the standardized table on proved reserves discussed above. This requirement was adopted in 2008 in order to "provide a mechanism for oil and gas companies to seek more favorable financing terms through more disclosure and increased transparency."⁴⁵ Given that many reserves may not be economically producible in future years given the transition in energy sources, the schedule should be updated to mandate inclusion of the sensitivity of reserve levels to future price projection scenarios, including a net zero scenario, and estimated emissions embedded in the reserves.⁴⁶ The existing rule already permits companies to include an optional disclosure of oil and gas reserves' sensitivity to different future price scenarios to improve access to financing through enhanced transparency. Importantly, it also requires companies to disclose assumptions used if they provide the optional reserves sensitivity analysis table.⁴⁷ But we are

⁴⁴ The use of a minimum set of reference scenarios to identify climate risks via stress testing has been mandated by the Bank of England in its "[Biennial Exploratory Scenario on the financial risks from climate change](#)". The Commission should note that participants in the exercise include issuers (or their UK divisions) that are cross-listed, including HSBC, Lloyd's Banking Group, NatWest Group, Santander, and AIG. This demonstrates that financial regulators are using scenario analysis - including mandating the use of specific reference scenarios as a tool to identify and assess sensitivity to financial risks emerging from climate change.

⁴⁵ SEC Release Nos. 33-8995; 34-59192, [Modernization of Oil and Gas Reporting](#) ("Standardized Measure for Oil and Gas Reporting") at 110.

⁴⁶ These are also metrics that the Sustainability Standards Board has called for in its standard on [Oil & Gas – Exploration & Production](#) (Version 2018-10).

⁴⁷ Standardized Measure for Oil and Gas Reporting at 112 ("[S]ince the new rules and amendments require the use of a single price to estimate reserves and since that price may not be as informative of value as a futures price, the new rules and amendments also gives [*sic*] companies the option of providing a sensitivity analysis and reporting reserves based on additional price estimates. . . . If companies elect to provide a sensitivity analysis, we expect this to benefit investors by allowing them to formulate better projections of company prospects that are more consistent with management's planning price and prices higher and lower that may reasonably be achieved. In particular, it allows companies the flexibility to communicate how their reserves would change under alternative economic conditions, including those that they may believe better reflect their future prospects."). The rule is inherently lopsided in that it allows companies to disclose forecasts of good news in periods of rising prices but withhold forecasts of bad news in periods of falling prices. Transparency in falling markets is as or more important to investor protection and confidence in our capital markets. The Commission should correct this imbalance and require clear disclosure about the effect of climate change and the energy transition on the value of oil and gas reserves. Historical prices are unlikely to be appropriate measures of whether such reserves are "economically producible."

aware of only one company that has voluntarily done so.⁴⁸ Given the uncertainty presented by climate change and the energy transition, the SEC should now mandate that sensitivity analysis.

9. **Climate-related environmental risks:** The SEC should also **mandate disclosure on material climate-related environmental risks** as part of a climate change disclosure rulemaking. Investors have expressed strong support for improved disclosure on climate-related risks including water, deforestation, food waste, and other agricultural waste and emissions. For example, in May 2021, 81 percent of DuPont shareholders voted in favor of a proposal calling for more transparency on pollution, including a report that would disclose how much plastic the company releases into the environment each year and assess the effectiveness of the company's pollution policies.⁴⁹

In particular, the SEC should ensure that all companies disclose information about material climate-related water issues.^{50 51} Competition for water, weak regulation of water withdrawals and discharges, growing population, ageing infrastructure, water scarcity and water contamination are all sources of material financial risks for many companies. Climate change exacerbates these risks. These can be acute, event-driven risks from extreme weather events including droughts, floods, cyclones, or hurricanes, or chronic risks resulting from longer-term shifts in climate patterns, such as sustained higher temperatures, sea-level rise or chronic heat waves. In addition to physical risks, regulatory and social risks, such as fines or enforcement actions, or risks to a company's social license to operate, are increasingly manifesting as financially material and impacting a wide range of asset classes.⁵² They may also have material

⁴⁸ See Shanna Cleveland, Rob Schuwerk, Chris Weber, Ceres/2 Degrees Investing Initiative/Energy Transition Advisors/Carbon Tracker Initiation, [Carbon Asset Risk: From Rhetoric to Action](#) (October 15, 2015) at 28, which found that Newfield Exploration was one of the only oil and gas companies to use the SEC's "Reserve Sensitivity Table" in their 10-K reports.

⁴⁹ Kevin Crowley, [DuPont Loses Plastic Pollution Vote With Record 81% Rebellion](#) (May 3, 2021).

⁵⁰ The TCFD also recommends specific risk disclosure on water. See TCFD, [Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures](#) (2017) at 6 ("Organizations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organizations' premises, operations, supply chain, transport needs, and employee safety.").

⁵¹ There is growing evidence of the financial materiality of water risks for both companies and investors. Water is a topic material to many industries according to the Sustainability Accounting Standards Board (SASB). Water-related risks such as flood, drought, sea level rise, increasing frequency and severity of weather events are linked to the physical climate risk dimension outlined by the Task Force on Climate Related Financial Disclosures. Other standards and frameworks including the Global Reporting Initiative (GRI), the Climate Disclosure Standards Board (CDSB), CDP and the Global Impact Investing Initiative's IRIS+ metrics include a broader set of water-related indicators related to physical, social and regulatory risk.

⁵² 2020: [Rising water stress risk threatens US coal plants, largely clustered in 5 states](#)

Based on an analysis of data from S&P Global Market Intelligence and the World Resources Institute, power generators in Texas, Indiana, Illinois, Wyoming and Michigan operate about 37.1 GW of coal-fired generation capacity in areas projected to face medium-high to extremely high water stress — when humanity's competition for water exceeds nature's ability to replenish it — due to climate change in 2030. Those five states are home to more than one-third of the 98.2 GW of coal capacity analyzed that falls into those upper-risk categories.

2020: [Constellation Brands: Water rights, a \\$1.4B brewery, and the social license to operate](#)

On Monday, March 23, 2020, Constellation Brands (STZ) stock fell -12% (vs. the S&P -2.9%) after Mexican citizens voted against the company's \$1.4B brewery project in Mexicali, Baja California. The brewery project began in 2016 and is already 70% complete, with STZ having invested ~\$900M to date. Concern from local activists, citizens, and environmental groups over water supply in the region led to the President calling for a local referendum in early

impacts on operations, supply chains, transport needs, and employee safety, which can lead to increased costs and reduced revenues.⁵³

The SEC should also address deforestation risk, a key driver of climate change, because it exacerbates climate risk.⁵⁴ It is in the clear financial interest of investors and consistent with their fiduciary duty to manage climate-related risks by engaging with companies on their deforestation exposure. Companies and investors should account for deforestation and its associated GHG emissions in order to have a complete view of how climate change will affect businesses and portfolios. Companies sourcing agricultural and forest commodities have exposure to transition risks due to their deforestation-related GHG emissions, as well as high levels of physical risk that are exacerbated by deforestation. The Commission should seek to support best practice in addressing deforestation risk by requiring regular disclosure of quantified progress to eliminate deforestation from issuers' supply chains, and disclosure of quantified progress on GHG emissions reductions from land use change.

10. **Climate-related social risks:** The SEC should **improve disclosure about companies' management of climate-related human capital and community impacts, including a Just Transition.**⁵⁵ The Paris Agreement states that governments should take into account "the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities."^{56 57} The inclusion of this concept in the Paris

March. However, local farmers, other citizens had been protesting the construction of the brewery since 2016 on the grounds that it would strain water supply

2021: [Initial Texas agricultural loss estimates from Winter Storm Uri exceed \\$600 million](#)

AgrLife Extension estimates of some of the state's biggest agricultural losses by commodity were:

— Citrus crops: At least \$230 million.

— Livestock: At least \$228 million.

— Vegetable crops: At least \$150 million.

2021: [DuPont, Chemours in \\$4 Billion 'Forever Chemicals' Cost Pact](#)

DuPont de Nemours Inc. and Chemours Co. agreed to a \$4 billion settlement of a dispute over environmental liabilities shifted to Chemours after it was spun off in 2015. The agreement covers payments for liabilities tied to a class of chemicals known as PFAS. PFAS are widespread in the environment and human blood after decades of use to make things slippery, nonstick or waterproof. Their bonds are so stable that they're known as "forever chemicals." Used to make items like carpets, fabrics and firefighting foams, they've been found at high levels in some areas, particularly around airports and Air Force bases, prompting concerns about drinking water and creating costs for municipal water systems and states.

⁵³ Further demonstrating that water risks are material, financial risks, the Networking for the Greening of the Financial System called for a need to focus both on climate risks and environmental degradation in their [Guide for Supervisors: integrating climate-related and environmental risks into prudential supervision](#), released in 2020. Specifically, water transition risks, including those from "government action aimed at regulating the supply of available water through extraction restrictions or pricing" are now included within the environmental degradation category. These types of regulatory measures may include water allocation, equipment upgrades, factory shutdowns, tighter wastewater discharge permits, tiered water pricing to optimizing industrial sectors to the water availability of the basin. Also see Debra Tan, Dharisha Mirando, CWR, [It Happened – Central Banks And Water Risks](#), July 12, 2021, discussing how central banks have begun to recognize the interlinkages between climate risks and environmental risks, and have recognized water transition risks for the first time as financial risks.

⁵⁴ Ceres, [The Investor Guide to Deforestation and Climate Change](#) (June 2020).

⁵⁵ UNFCCC (2015) [The Paris Agreement](#), see also UNFCCC, [Technical Paper: Just Transition of the Workforce, and the Creation of Decent Work and Quality Jobs](#) (2020). Note, in particular, conclusions at 63-65, "The Way Forward".

⁵⁶ UNFCCC (2015) [The Paris Agreement](#).

⁵⁷ ILO (2016) [Guidelines for a just transition towards environmentally sustainable economies and societies for all](#).

Agreement signals both a climate transition risk and an opportunity for issuers. Therefore, investors need more informative data about issuers' management of these issues, which can affect their license to operate. In 2020, a broad coalition of 161 investors representing US \$10.2 trillion in assets endorsed the "Statement of Investor Commitment to Support a Just Transition on Climate Change." The statement signalled the rationales of "systemic risk", "fiduciary duty", and "materiality" as the basis for a commitment by the signers to "take action to support a just transition by integrating the workforce and social dimension in our climate practices" including endorsing and promoting disclosure.⁵⁸

We recognize that in August 2020 the SEC amended Item 101 of Regulation S-K to provide that companies' description of the business "may include, but should not be limited to, the information specified" in six categories, including a description of the company's human capital resources. Upon adoption of this amendment, then-SEC Chairman Jay Clayton stated that he expected "to see meaningful qualitative and quantitative disclosure, including, as appropriate, disclosure of metrics that companies actually use in managing their affairs" and that he "would also expect companies to maintain metric definitions constant from period to period or to disclose prominently any changes to the metrics used or the definitions of those metrics." Academic analysis of the first year of implementation reveals that "most disclosure is boilerplate and lacks quantitative metrics. As such, the new rules appear to contribute to the length but not the informativeness of 10-K disclosure."⁵⁹ We encourage the SEC to revisit and strengthen this provision to include more robust human capital disclosures, including disclosures that evince companies' resilience to the physical effects of climate change on their employees and the communities from which they draw employees as well as preparedness for the energy transition.

Specifically, as explained in *Climate Change and the Just Transition: a Guide for Investor Action*:

For investors, it will be essential that the assets they hold operate effective systems for human capital management at a time of transformational change in technologies, business models and market demand. To date, human capital management has been absent from most business responses to climate change. Investors need to understand

⁵⁸ "As investors with a requirement to act in the best interest of our beneficiaries and in line with our fiduciary duties, we believe that strategies to tackle climate change need to incorporate the full environmental, social and governance (ESG) dimensions of responsible investment. There is an increasing recognition that the social dimension of the transition to a resilient and low-carbon economy has been given insufficient attention, notably in terms of the implications in the workplace and wider community. Achieving a just transition, in line with the 2015 Paris Agreement on Climate Change, will help to accelerate climate action in ways that deliver the Sustainable Development Goals." UN PRI, Statement of Investor Commitment to Support a Just Transition on Climate Change (Apr. 16, 2020); see also UN PRI, Climate Change and the Just Transition: A Guide for Investor Action (Apr. 16, 2020), at 6 (noting that climate change and the energy transition could result in "not only 'stranded assets' but also 'stranded workers' and 'stranded communities'". Past experience of deindustrialisation in many parts of the world highlights the importance of looking beyond the direct employment impacts to understand the wider ecosystem of prosperity in affected regions."). The worker disruption anticipated in connection with climate change and the energy transition will significantly increase systemic risk in the capital markets. Disclosure at the company level, elucidating companies' strategies to protect the ongoing resilience and value of their workforces, will be imperative to economic stability.

⁵⁹ Amit Batish, Andrew Gordon, John D. Kelper, David F. Larcker, Brian Tayan, And Courtney Yu, Human Capital Disclosure: What Do Companies Say About Their "Most Important Asset"?, Stanford Closer Look (May 5, 2021) (finding that "Early disclosure suggests that th[e] objective [of the August 2020 amendment] is unlikely to have been met.").

how companies are implementing the just transition in the workplace. This includes anticipating human capital implications, respecting human rights, delivering health and safety, building the skills needed for climate success, ensuring social dialogue in the transition process, and managing responsible restructuring (e.g. protecting pensions). Poor management of the transition could damage employee engagement and innovative capacity as well as reduce resilience in crisis situations.⁶⁰

In light of these systemic risks to capital markets generally as well as the risks corporate value, we recommend that the Commission include in its climate disclosure rules instructions to disclose the impact of climate change and the energy transition on the company's work force and human capital management strategy, including specifically impacts on the communities from which the company draws its workforce, health and safety challenges, training and its effectiveness in preparing the company and its workforce for climate change and the energy transition, the portions of the workforce involved in low-emissions and high-emissions activities, and the state of the company's workforce and retirement benefit plans.

Part II: Recommendations for related rulemakings and processes

11. **Climate and ESG Advisory Group:** The SEC should **establish an external Climate and ESG Advisory Group** under the Federal Advisory Committee Act to advise the Commission on the materiality of and investor interest in a range of sustainability issues. Regarding climate change, the group should be tasked with developing recommendations for keeping the SEC's disclosure regime up-to-date in light of the fast evolving understanding of climate change impacts, progress and challenges on the path to a net zero economy, and capital market responses to climate risks and disclosures. SEC rules should be updated regularly in response to these developments, and they should include the development or adoption of new metrics where investor needs dictate this. In addition, the SEC Investor and Asset Management Advisory Committees have done significant work on ESG issues, and we hope that will continue in the future.
12. **Regulation of private markets:** The Commission should revise its rules to provide incentives to large companies and large offerings of securities to join the SEC's public markets reporting regime.⁶¹ Further, the Commission should consider conditioning any remaining exemptions upon the disclosure of details of the securities, including financial information, and climate and ESG-related information. The Commission should create a committee or task force to enlist advisory support for regulatory issues related to private market registration and disclosure.
13. **Inter-agency collaboration on climate:** The Commission should collaborate with other financial regulators at the federal and state level to share analysis and information on strategies to assess and mitigate climate risk, including the role of disclosure to protect investors and fulfill other parts of the SEC's mission, the role and benefits of disclosure to macro and micro-prudential

⁶⁰ Nick Robins, Vonda Brunsting and David Wood, Grantham Research Institute on Climate Change and the Environment, et. al., *Climate change and the just transition: A guide for investor action* (2018) at 12. The guide is a product of the Just Transition Initiative led by the Grantham Research Institute on Climate Change and the Environment at the London School of Economics and Political Science (LSE) and the Initiative for Responsible Investment at the Harvard Kennedy School.

⁶¹ Tyler Gellasch and Lee Reiners, *From Laggard to Leader: Updating the Securities Regulatory Framework to Better Meet the Needs of Investors and Society*, Global Financial Markets Center at Duke University School of Law, Feb. 2021.

supervision of climate risk management by regulated entities, best practices in auditing, enforcement and compliance, and scenario analysis, among others. Climate change poses both material and systemic risks, and inter-agency collaboration can provide value in identifying climate information that must be disclosed, and to which regulators, to meet the dual needs of company-specific and systemic risk information.

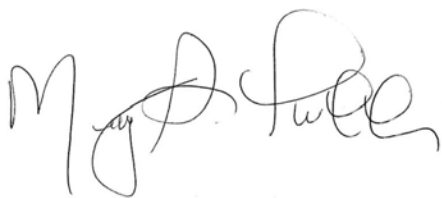
14. **International cooperation on climate:** International momentum to improve climate risk disclosure is growing rapidly. We are pleased to see that the SEC is co-leading IOSCO's new Technical Expert Group under its Sustainable Finance Task Force. We call on the SEC to expand its participation in work to globally harmonize climate change disclosure rules. We also welcome the work of Climate Envoy John Kerry and the work of the Department of the Treasury and the Financial Stability Oversight Council to promote transparency and disclosure of climate risk. We urge the Commission to coordinate and share learnings from the RFI and rulemaking with these efforts. But at the same time, Ceres believes it is important for the SEC to urgently move forward with a proposed rulemaking in the next few months and not wait for international consensus.

We commend the Commission's new "whole of the SEC" approach to regulating the capital markets in a way that reduces climate change risk, including through its filings reviews, enforcement and hiring decisions. Our recommendations for climate disclosure and related rulemaking build on this approach to ensure that investors receive the information they require and issuers receive clear disclosure expectations. We believe that implementing these recommendations will pay off with dramatically improved disclosure and financial reporting that aligns with the SEC's "mission of protecting investors, maintaining fair, orderly, and efficient markets, and facilitating capital formation."

Thank you very much for your consideration and extensive investments in these issues. Your work and attention are deeply valued. We stand ready to provide additional background and resources for the Commission. If there are questions on the points highlighted here or in the appendices, or if you would like further information, please let me know. In addition, you can reach out to Isabel Munilla at [REDACTED] and Jim Coburn at [REDACTED]

Best wishes for success in your important deliberations.

Sincerely,



Mindy S. Lubber
CEO and President
Ceres, Inc.

Steven Rothstein
Isabel Munilla
Jim Coburn
Samantha Ross

cc: Chair Gary Gensler

Commissioner Hester M. Peirce
Commissioner Elad L. Roisman
Commissioner Allison Herren Lee
Commissioner Caroline A. Crenshaw

Appendix A: Answers to the Commission's enumerated questions

Our answers to the enumerated questions in the SEC Request for Public Input follow:

Question Set 1: How can the Commission best regulate, monitor, review, and guide climate change disclosures in order to provide more consistent, comparable, and reliable information for investors while also providing greater clarity to registrants as to what is expected of them?

The SEC should pursue a multi-pronged approach to provide more consistent, comparable and reliable climate change disclosure for investors as well as greater clarity to registrants. This approach should include regulation (climate change disclosure rules), regular monitoring and enforcement of disclosures by the Corporation Finance and Enforcement divisions, periodic review of selected issues (such as the current review of compliance with the SEC's 2010 interpretive guidance on climate disclosure), guiding issuers (through education and engagement) and closely collaborating with the Financial Accounting Standards Board (FASB) and the Public Company Accounting Oversight Board (PCAOB). Collaboration with the Municipal Securities Rulemaking Board (MSRB), IASB, IOSCO and foreign regulators is very important to ensure as much alignment as possible of different disclosure regimes.

The staff of the SEC's Division of Corporation Finance, based on their experience improving disclosures on other issues, are well positioned to answer the question of how to best improve climate change disclosures. This is because climate change poses material financial risks and opportunities like other issues the SEC regulates, so, in many ways, experience with other issues can guide the SEC's actions on climate change. We also commend the SEC on expanding its current staff with climate knowledge and continue to encourage this focus in your hiring. Our suggestions for how to regulate, monitor, review, and guide disclosures follow.

Regulating climate change disclosures

Climate change disclosure rulemaking is the most important near-term action the SEC can pursue. In comparison with interpretive or staff guidance or other strategies, rulemaking will provide the most direct path to more consistent, comparable and reliable climate change disclosure, by providing the most clarity to issuers about what information they should disclose. Our discussions about the key elements of an SEC climate disclosure rulemaking are on pages 6-17.

Monitoring and reviewing climate change disclosures

Monitoring of the quality of climate change disclosures should occur in both the Corporation Finance and Enforcement divisions and other offices as appropriate. In the Division of Corporation Finance, climate change disclosure should be monitored as part of the Sarbanes-Oxley Act requirement that the Division undertake some level of review of each reporting company at least once every three years and review a significant number of companies more frequently.⁶² On February 24, 2021, then Acting Chair Allison Herren Lee announced several important steps to increasing the Division's focus

⁶² SEC, "[Filing Review Process](#)".

on climate change, which include elements of both monitoring and reviewing disclosures.⁶³ Those include reviewing the extent to which issuers address the topics identified in the 2010 guidance, assessing compliance with disclosure obligations under the federal securities laws, engaging with public companies on these issues, absorbing lessons on how the market is currently managing climate-related risks, and using insights from this work to begin updating the 2010 guidance to take into account developments in the last decade.⁶⁴

The degree of SEC engagement with issuers on a range of topics is often measured by examining all the Division of Corporation Finance comment letters over the course of a year and how the letters have changed from previous years.⁶⁵ Ceres has found that in past years, the Division has paid little attention to climate change in issuers' filings, specifically regarding the SEC's 2010 interpretive guidance on climate change disclosure (2010 guidance). From February 2010 to December 2013, Ceres and CookESG Research found only 25 climate-related SEC comment letters to companies and 27 communications with asset managers, out of more than 45,000 comment letters sent to registrants.⁶⁶ More recently, Ceres found only one letter in the time period of January 2017 to July 2019 asking an issuer to improve their climate-related disclosure.⁶⁷

The Division's past approach to climate change disclosure stands in stark contrast to how it addressed issuers' Year 2000 (Y2K) preparedness and disclosure. The SEC used many strategies to signal to issuers the importance of corporation actions in response to Y2K risks and disclosure of those actions. This includes staff legal bulletins and notices in May and October of 1997 and January of 1998.⁶⁸ This was followed by the creation of a Year 2000 task force "to determine how many public companies are addressing the Year 2000 issue and to assess whether the disclosure being provided is meaningful."⁶⁹ The task force evaluated the quality of Y2K disclosure in a major review, reading disclosures about the issue in the filings of 1,023 public companies from 12 major industries.⁷⁰ From October 1997 to at least June 1998, the Division issued a standard Y2K comment to all public companies as part of its filing review process.⁷¹ We recommend the Commission examine aspects of its approach to Y2K as potential models for how to approach climate change disclosure.

Accountability to the public, through better transparency on the SEC's efforts, is an essential element of monitoring and reviewing disclosures. The Commission has taken an important step in that

⁶³ Acting Chair Allison Herren Lee, SEC, [Public Statement, Statement on the Review of Climate-Related Disclosure](#) (Feb. 24, 2021).

⁶⁴ Id.

⁶⁵ See, for example, EY, [SEC Reporting Update - Highlights of trends in 2020 SEC comment letters](#) (September 17, 2020) and PwC, [SEC comment letter trends](#) (March 31, 2021),

⁶⁶ Jim Coburn, Jackie Cook, Ceres, [Cool Response: The SEC & Corporate Climate Change Reporting: SEC Climate Guidance & S&P 500 Reporting—2010 to 2013](#) (February 2014) at 20.

⁶⁷ SEC Commissioner Allison Herren Lee, Public Statement, ["Modernizing" Regulation S-K: Ignoring the Elephant in the Room](#) (Jan. 30, 2020), citing Mindy S. Lubber, CEO and President of Ceres, [Comments on the Climate Risk Disclosure Act of 2019](#) (July 18, 2019) ("A search for SEC comment letters asking issuers to improve their climate-related disclosure in Commission filings reveals only one such letter from January 2017 to [July 2019].").

⁶⁸ SEC, [Interpretation: Disclosure of Year 2000 Issues and Consequences by Public Companies, Investment Advisers, Investment Companies, and Municipal Securities Issuers](#) (August 4, 1998), 17 CFR Parts 231, 241, 271, 276,.

⁶⁹ Id.

⁷⁰ Id.

⁷¹ SEC, Division of Corporation Finance, [Supplement to Commissioner Unger's June 10, 1998, Testimony: Year 2000 Disclosure Task Force Survey](#).

direction by creating a web page devoted to its responses to climate and ESG issues.⁷² To improve transparency, we also recommend that the Commission announce plans to annually report and make available to the public a compilation of the information disclosed by issuers and an assessment of compliance of issuers with climate disclosure rules.⁷³

Enhancing SEC climate change education for staff, issuers, investors and the public

SEC education of SEC staff, issuers and investors about climate change disclosure, risks and opportunities is an essential element of improving disclosure. A 2018 GAO report discovered only two SEC staff trainings on climate change disclosure, in 2010 and 2016, and also found that trainings on industry-specific issues did not include climate change issues.⁷⁴ The SEC has already taken steps to change this, such as forming a new climate/ESG task force; stepping up efforts to examine the quality of climate change disclosures; and discussing climate issues in speeches, webinars, conference panels, Asset Management Advisory Committee meetings, and Investor Advisory Committee meetings.

These steps are very important, and we also recommend that the SEC offer in-depth training to staff on the financial implications and disclosure of climate change/ESG issues. Examples of trainings that may be appropriate or adaptable for SEC staff include the TCFD Knowledge Hub's online climate change disclosure courses,⁷⁵ the GRI Academy's offerings,⁷⁶ the CFA Institute's Certificate in ESG Investing, the SASB Fundamentals of Sustainability Accounting credential,⁷⁷ and the Ceres/Berkeley Law ESG board education course.⁷⁸

We also recommend that the SEC offer education for issuers and investors on climate change issues. The New York State Department of Financial Services' climate change webinar series offers one model for how SEC trainings could work. DFS' webinars for insurance companies covered why insurers should care about climate change, risk management and disclosure, insurers as investors, and setting metrics and targets.⁷⁹ DFS banking-focused webinars were developed for community and regional banks and mortgage banking institutions and covered the financial risks from climate change, and physical risks and coastal risks in the Northeast.⁸⁰ One example from abroad is the Bank of England's climate change business leaders event, which was attended by representatives of more than 650 businesses.⁸¹

Additional elements for improving disclosures and providing greater clarity to issuers

In addition to these actions, we would encourage greater SEC engagement with investors on climate

⁷² SEC, [SEC Response to Climate and ESG Risks and Opportunities](#).

⁷³ These are provisions of the [Climate Risk Disclosure Act of 2021](#), introduced by Senator Elizabeth Warren and Representative Sean Casten on April 15, 2021.

⁷⁴ GAO, [Climate-related Risks: SEC Has Taken Steps to Clarify Disclosure Requirements](#) (February 2018) at 23-24.

⁷⁵ TCFD Knowledge Hub, [Online courses](#).

⁷⁶ GRI, [GRI Academy](#).

⁷⁷ SASB, [About the FSA Credential](#).

⁷⁸ Ceres and Berkeley Law, Executive Education, [ESG: Navigating the Board's Role](#).

⁷⁹ New York State Department of Financial Services, [DFS Climate Change Seminar Series, Sessions 1-4](#), December 4, 2020-February 17, 2021.

⁸⁰ New York State Department of Financial Service, [DFS Climate Change Webinar Series - Clean Energy Financing for Community and Regional Banks](#), Series 1-3, February 18, 2021-June 10, 2021.

⁸¹ Bank of England, [News release: Bank of England convenes members of the public and businesses to join the climate change debate](#) (Jan. 29, 2021),

change issues. These engagements could include discussions of the climate risk information investors currently use (both voluntary and mandatory), and the information they need and are not receiving. Currently, some staff discussions with investors focused on ESG take place as part of the Investor Advisory Committee's and Asset Management Advisory Committee's work, but regular engagements open to greater numbers of investors would be helpful.

A venue the SEC could consider for such engagements would be public forums conducted by a new SEC Climate and ESG Advisory Committee. This committee could also help the SEC monitor the evolving understanding about the nature of climate change impacts and advise the Commission regarding updating its rules and guidance to keep up with those developments.⁸²

Collaboration with other federal financial agencies is also essential to improving disclosure. The Treasury Department's new climate hub will be coordinating with other agencies,⁸³ and the Commodity Futures Trading Commission has formed a new climate risk unit.⁸⁴ Federal Reserve Banks are organizing conferences and seminars on climate economics.⁸⁵ These initiatives and events will consider the systemic and sub-systemic risks of climate change. The SEC should monitor and, as appropriate, participate in these initiatives and events.

As mentioned above, SEC collaboration with the MSRB is very important to ensure as much alignment as possible of different disclosure regimes. A number of Ceres' recommendations to the MSRB⁸⁶ are relevant to the SEC's work on climate disclosure:

Disclosure

1. Municipal securities regulators and the federal financial market regulator overseeing them should examine the quality of climate-related disclosures in municipal bonds' official statements and continuing disclosures, and determine whether or not the disclosure provided is adequate for market participants to assess any underlying climate risk exposure. If disclosure is found to be deficient, they should issue a public statement calling on key stakeholders, including municipalities, municipal advisers, and banks, to improve disclosure.
2. Develop a climate disclosure pilot initiative while the broader rules are being resolved.
3. Adopt disclosure standards, including machine-readable data standards, to enhance the availability, comparability, and timeliness of climate risk data to municipal debt investors.
4. Municipal securities regulators should provide improved tools on the EMMA website to search for climate-related disclosure in municipal bond filings, similar to that provided for

⁸² One example of another securities regulators' engagements, which may be helpful background to the SEC, is the Canadian Securities Administrators' 50 consultations with investors and other stakeholders; see Canadian Securities Administrators, [Canadian securities regulators report on climate change-related disclosure project](#) (April 5, 2018).

⁸³ U.S. Department of the Treasury, [Press release: Treasury Announces Coordinated Climate Policy Strategy with New Treasury Climate Hub and Climate Counselor](#) (April 19, 2021).

⁸⁴ CFTC, [Press release: CFTC Acting Chairman Behnam Establishes New Climate Risk Unit](#) (March 17, 2021), .

⁸⁵ Federal Reserve Bank of Richmond, [Climate Change Economics conference](#) (Nov. 19-20, 2020); Federal Reserve Bank of San Francisco, [Virtual Seminar on Climate Economics](#) (ongoing).

⁸⁶ Steven M. Rothstein, Managing Director, Ceres Accelerator for Sustainable Capital Markets, [Letter to MSRB in response to request for input on strategic goals and priorities](#) (January 11, 2021) at 11.

publicly traded companies, to allow better assessments of potential climate risk exposure in such assets and how they are being addressed.

Risk management

5. Establish a task force of internal staff and external individuals to develop a detailed plan to address the risks of climate change to the municipal marketplace and institute a multifaceted plan to address this risk.

6. Municipal securities regulators and federal financial market and prudential regulators should study how risks facing municipalities differ from—and could in some cases be more impactful than—risks facing issuers and explore options to enhance disclosure on these issues.

7. Prepare Annual Report(s) on climate risks for the municipal bond marketplace including an analysis of data from EMMA, actions taken, and trainings offered.

8. MSRB should expand the current offerings on its MuniEdPro: Municipal Market Education for Professionals platform to include information on the risks of climate change to increase transparency and market efficiency in the municipal bond market.

Where and how should such disclosures be provided? Should any such disclosures be included in annual reports, other periodic filings, or otherwise be furnished?

We believe climate-related disclosures should be incorporated into the SEC's existing disclosure rules and provided in annual financial reports. The climate crisis poses systemic risks that materially impact companies, and the energy "transition will have major implications for most sectors of our economies."⁸⁷ Physical risk is also likely to pose systemic risks for the entire economy, if we are unsuccessful in keeping future warming below 1.5-2°C. Climate change threatens many physical and transition risks to company assets, operations and employees as well as to the communities that companies serve, and these risks translate into financial risks that belong in SEC filings. Voluntary climate disclosure frameworks have resulted in quality disclosure from some companies, but the frameworks have not provided comparable, decision-useful information to investors. Among other things, investors face considerable challenges in relating voluntary climate reporting to SEC filings. Moreover, because climate disclosures tend to be outside SEC filings even when they are financially material, inconsistencies with the company's financial reports or other SEC filings may go undetected. Indeed, there is no requirement that a company's auditors even read companies' climate disclosures unless they are in the annual report. That is, under existing auditing standards, auditors are required to read and consider whether other information in documents that contain the financial statements is consistent with the financial statements.⁸⁸ That requirement does not extend to voluntary reports that contain material climate change information.

⁸⁷ Josh Ryan-Collins, *Beyond Voluntary Disclosure: Why a 'Market-Shaping' Approach to Financial Regulation is Needed to Meet the Challenge of Climate Change*, SUERF Policy Note No. 61 (Apr. 2019), at 2 (In addition to investment at risk in the fossil fuel sector, "[a] range of other forms of carbon-intensive infrastructure, including real estate, transport and electricity generation that depend on these stranded assets could also be negatively affected and be subject to falling valuations.").

⁸⁸ PCAOB Auditing Standard No. 2710, *Other Information in Documents Containing Audited Financial Statements*.

Question Set 2: What information related to climate risks can be quantified and measured? How are markets currently using quantified information? Are there specific metrics on which all registrants should report (such as, for example, scopes 1, 2, and 3 greenhouse gas emissions, and greenhouse gas reduction goals)? What quantified and measured information or metrics should be disclosed because it may be material to an investment or voting decision? Should disclosures be tiered or scaled based on the size and/or type of registrant)? If so, how? Should disclosures be phased in over time? If so, how? How are markets evaluating and pricing externalities of contributions to climate change? Do climate change related impacts affect the cost of capital, and if so, how and in what ways? How have registrants or investors analyzed risks and costs associated with climate change? What are registrants doing internally to evaluate or project climate scenarios, and what information from or about such internal evaluations should be disclosed to investors to inform investment and voting decisions? How does the absence or presence of robust carbon markets impact firms' analysis of the risks and costs associated with climate change?

Numerous, rigorous measurement systems exist today to track and report climate-related information that bears on financial risk, the most critical of which is the GHG Protocol to measure and report on GHG emissions. But since these systems are voluntary, many companies choose not to use them or choose to modify them in ways that reduce clarity and comparability.

GHG emissions are fundamental to investors' understanding of a company's financial position in the face of the energy transition. As discussed in Part I, we propose tabular, assured disclosure of a company's estimated Scopes 1, 2 and 3 GHG emissions in SEC filings, because this is critical to investors' understanding of the quality of a company's earnings in the face of climate change and the energy transition as well as to an understanding of a company's liquidity and capital resources, especially in light of the climate commitments of financial institutions to restrict financing of emissions-intensive activities.⁸⁹ Both current and estimated future GHG emissions can have a material impact on companies' financial statements and access to capital. In particular, investor actions and emerging research indicate both GHG emissions and net zero scenario analysis bear on investment and voting decisions.⁹⁰ Investors need clear, quantitative and comparable emissions data.

The challenges that banks face in assessing climate change risks illustrate the importance of emissions disclosure. The disclosure of climate-related financial information at the firm level is a precondition for banks to be able to conduct a climate financial risk assessment of their portfolio. To build climate-resilient portfolios, banks need to be able to compare firms based on their climate and sustainability risk profile. However, the lack of comparable and consolidated information makes this step very complicated, and in some cases impossible. Data is currently available for a set of about 3000 large firms in the world (typically listed in equity markets). The information comes from a small set of data providers such as CDP, based on firms' self-declared estimates. The data is not available for most mid-size

⁸⁹ See also B. Downer, J. Ernstberger, S. Reichelstein, S. Schwenen, and A. Zaklan, *The Impact of Carbon Disclosure Mandates on Emissions and Financial Operating Performance*, Stanford Working Paper No. 3 (May 2020) (finding that firms subject to mandatory GHG emissions disclosure increased both production costs and sales, resulting in no deterioration in financial operating performance despite significant carbon footprint reduction following the disclosure mandate).

⁹⁰ For example, 98 percent of General Electric's shareholders voted to ask the company to report on all three scopes of GHG emission at the May 4, 2021, annual general meeting. See Ceres, Press release, [A Climate Action 100+ flagged vote at General Electric wins record support from shareholders, illustrating level of concern about climate crisis](#) (May 4, 2021).

and small firms; for large firms, it may only cover part of the firm's activities. Furthermore, the quality and coverage of GHG emissions data becomes poorer as we move from Scope 1 to Scope 2 to Scope 3 emissions.

More granular information on the economic activities to which banks are exposed via their lending contracts would allow banks to better assess their exposure to climate change risks. In addition, it would allow financial regulators to provide a more comprehensive assessment of the exposure of the credit sector to climate change risks, identifying the drivers of the largest risks.

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 90% of emissions from companies. The GHG Protocol is working to improve guidance on measuring and reporting on emissions from land use and land use change, and their final guidance is anticipated in early 2022.

The Greenhouse Gas Protocol is the leading global measurement framework for GHG emissions. It is widely used in the United States and elsewhere, and many companies are already accustomed to reporting their emissions under this Protocol. It is a reference measurement system used in the SASB, CDP and many other disclosure frameworks. Many companies even obtain assurance, including investor-grade (reasonable) assurance, over GHG emissions measured under the GHG Protocol, demonstrating that disclosures under the Protocol are both measurable and verifiable. Indeed, GHG emissions are by far the most common sustainability subject matter for external assurance. A 2018 report found that, among the S&P 500 companies that obtained assurance on all or a portion of their voluntary sustainability reports, most obtained assurance over GHG emissions disclosures.⁹¹

**Should disclosures be tiered or scaled based on the size and/or type of registrant)? If so, how?
Should disclosures be phased in over time?**

We are open to tiering based on materiality. We also believe that many smaller companies have lower emissions and simpler value chains, and therefore the scale of effort required will naturally be less than for larger or high-emitting companies. We note, for example, that small shale oil producers or small midstream oil and gas companies may nevertheless face considerable climate and transition risks that would be material to investment decisions and proxy voting.

We recommend that the most efficient use of the SEC's limited resources would be to promulgate foundational climate disclosures first, i.e., as discussed above, explicitly incorporating the TCFD recommendations into Regulation S-K and requiring disclosure of GHG emissions, use of internal carbon pricing, and a net zero scenario analysis. TCFD disclosures are designed to be flexible to fit companies in different industries and of different sizes.

Once those requirements are in place, the SEC could turn to industry-specific guidance, both directly and, as appropriate, by leveraging other standard-setting bodies' work. Moreover, we recognize that development of assurance standards may lag finalization of the disclosure requirements, although we encourage the SEC to direct the PCAOB to work closely with the SEC during development of the disclosure requirements. This prioritization would naturally phase in requirements over time as well as

⁹¹ IRRCI and Si2, State of Integrated and Sustainability Reporting 2018 (Nov. 2018) at 5.

give the SEC time to monitor compliance, identify and address any implementation issues, develop more specific guidance as needed, and consider whether the use of a designated standard-setter to develop industry-specific disclosure requirements would be practicable and useful.

We also believe staggering implementation to prioritize large companies and high-emitting industries is appropriate.⁹² However, we recognize that there have been significant challenges to previous efforts by the Commission to phase in disclosures. Given the urgency of improving climate-related disclosure to investors as well as their materiality to investment decisions and voting, we encourage the Commission to ensure the most rapid disclosure possible of the items we propose in Part I.

How are markets evaluating and pricing externalities of contributions to climate change? Do climate change related impacts affect the cost of capital, and if so, how and in what ways?

By definition externalities are not priced into markets. For instance, a coal producer will base its prices on costs and profit maximization, without necessarily considering the costs accrued to those harmed by pollution, which in the long run includes the producer's own customers, suppliers, employees and other resources needed to continue as a going concern. Markets are thus not efficient when it comes to climate change, because of the negative externalities. This is a classic case of market failure. Correcting this market failure by providing markets with consistent, comparable, and assured corporate reporting will facilitate markets properly pricing climate-related risks. It would allow investors to make better decisions and thus would incentivize companies to engage in risk mitigation through changes in activities and strategies.

Voluntary climate reporting by companies, while an important contribution, has failed to address this need. Mandatory disclosure requirements will allow markets to price in risks (and opportunities) more rapidly, with a much better "signal to noise" ratio. For instance, it will enable the buy side to make decisions, both on buying or selling as well as voting, in a more precise way. These improvements in market efficiency will also provide for more efficiently assigned resources.

Consistent company disclosure about contributions to climate change, e.g., GHG emissions disclosure, would address this market failure by enabling markets to construct mechanisms to internalize the externalities of negative climate impacts, as with the adage, "sunlight is the best disinfectant." In addition, disclosure facilitates efficient capital allocation and cost of capital, as other regulatory measures to internalize the externalities of climate impacts, e.g. a carbon pricing system. That disclosure must include Scope 3 emissions, in addition to Scopes 1 and 2, to completely capture the risks posed by GHG emissions. This lack of disclosure makes it difficult for financial markets to price transition risk.⁹³

⁹² The Center for American Progress, for example, has suggested that "Scope 3 disclosures could be phased in beginning with—or limited to—industries where data are available and companies are of significant size." See Alexandra Thornton and Andy Green, Center for American Progress, [The SEC's Time To Act: A New Strategy for Advancing U.S. Corporate and Financial Sector Climate Disclosures](#) (February 19, 2021)

⁹³ Joseph Power, Jordan McDonald, So Lefebvre and Tom Coleman, CDP, [The time to green finance: CDP financial services disclosure report 2020](#). The report found, "Almost all financial institutions' climate impact and risk is driven by the activities they finance in the wider economy, yet the data suggests that this is not yet where the focus is for a large number of institutions." Id. at 3. In addition, the report found that 49% of financial institutions stated they do not conduct any analysis of how their portfolio impacts the climate, and 25% of disclosing financial institutions reported their financed emissions. Id.

Companies in markets that have mandatory quantified disclosure of GHG emissions often reduce their emissions, with no deterioration in financial operating performance.⁹⁴ On the other hand, when investors do not have clear, quantified information on companies' sensitivity to a net zero economic system, they react to the uncertainty through voting.⁹⁵

What are registrants doing internally to evaluate or project climate scenarios, and what information from or about such internal evaluations should be disclosed to investors to inform investment and voting decisions?

Investors expect companies to go beyond generalized risk factors to disclose real data about what they are doing to mitigate climate risks and the effects of different scenarios on their business. That includes, as discussed above in Item 7, a scenario that envisions a net zero economy by 2050. This requires companies to take climate risk into account in traditional financial measurement processes, because scenario analysis uses financial estimation tools, models and assumptions that have long been a part of financial reporting. As the SEC acknowledged in its 2008 modernization of oil and gas reporting, standardized measures are useful to facilitate comparisons across companies.⁹⁶ Similarly, disclosure of a standardized net zero scenario analysis using standardized assumptions will help investors compare the "business prospects of different companies,"⁹⁷ as "standardizing firms' reporting practices can make comparisons across firms easier and less costly."⁹⁸

⁹⁴ B. Downer, J. Ernstberger, S. Reichelstein, S. Schwenen, and A. Zaklan, *The Impact of Carbon Disclosure Mandates on Emissions and Financial Operating Performance*, Stanford Working Paper No. 3 (May 2020) (finding that firms subject to mandatory GHG emissions disclosure increased both production costs and sales, resulting in no deterioration in financial operating performance despite significant carbon footprint reduction following the disclosure mandate).

⁹⁵ Natasha Landell-Mills, CFA, Sarasin & Partners, *Public Statement on Shell and BP Votes* (April 28, 2021) (explaining that Sarasin intends to vote against the audit committee chair because "[t]here is no supplementary disclosure in the Notes on what Paris-alignment would mean for their financial position. Consequently, we cannot determine the capital at risk associated with a net zero pathway. No mention is made of dividend resilience in the face of decarbonisation.").

⁹⁶ SEC rule, *Modernization of Oil and Gas Reporting*, 74 FR 2157 (Jan. 1, 2010) at 13 ("The use of a 12-month average historical price to determine the economic producibility of reserves quantities increases comparability between companies' oil and gas reserves disclosures.").

⁹⁷ Id. ("The objective of reserves estimation is to provide the public with comparable information about volumes, not fair value, of a company's reserves available to enable investors to compare the business prospects of different companies.").

⁹⁸ H. Christensen, L. Hail, and C. Leuz, *Mandatory CSR and Sustainability Reporting: Economic Analysis and Literature Review* (April 2021).

Climate scenario analysis disclosure is an emerging global norm

Climate scenario analysis is supported by a range of U.S.⁹⁹ and international financial regulators,¹⁰⁰ standard setting organizations,¹⁰¹ academics,¹⁰² notable issuers and stakeholders because it is an effective tool to understand vulnerabilities to climate change and the energy transition as well as preparedness. The TCFD recommends that all companies disclose scenario analyses that “describe the resilience of the organisation’s strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario” and “[d]isclose the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material.”¹⁰³

Since the TCFD’s recommendations were issued, climate scenario analysis has become a best practice for many companies to understand the range of exposure of a company’s business models and assets. Its use was endorsed by the CFTC’s Climate Subcommittee which found that “[c]limate-related scenario analysis can be a useful tool to enable regulators and market participants to understand and manage climate-related risks. Scenarios illustrate the complex connections and dependencies across technologies, policies, geographies, societal behaviors, and economic outcomes as the world shifts toward a net zero emissions future. Scenario analysis can help organizations integrate climate risks and opportunities into a broader risk management framework, as well as understand the potential short-term impact of specific triggering events.”¹⁰⁴

Central bankers and supervisors have begun work to integrate scenario and stress testing into supervision exercises of regulated entities to ensure adequate risk assessments.¹⁰⁵ For example, in 2019,

⁹⁹ Federal Reserve Bank of San Francisco, [FRBSF Economic Letter: Climate Change Is a Source of Financial Risk](#) (February 8, 2021) (“A useful tool for calibrating these [climate] risks is climate scenario analysis, which explores the repercussions for financial institutions from different climate-related outcomes.”) See also, U.S. Commodity Futures Trading Commission, Market Risk Advisory Committee, Climate-Related Market Risk Subcommittee, 2020, [Managing Climate Risk in the U.S. Financial System](#) (“Climate-related scenario analysis can be a useful tool to enable regulators and market participants to understand and manage climate-related risks. Scenarios illustrate the complex connections and dependencies across technologies, policies, geographies, societal behaviors, and economic outcomes as the world shifts toward a net zero emissions future.”)

¹⁰⁰ Network for Greening the Financial System (NGFS), [Guide to climate scenario analysis for central banks and supervisors](#) (June 2020) at 4 and 7. (“The forward-looking nature of climate risks and the inherent uncertainty about future events make it difficult to assess them using standard risk modelling methodologies.” [...] “It provides a flexible ‘what-if’ framework for exploring how the risks may evolve in the future. These scenarios can help a wide range of players better understand how climate factors will drive changes in the economy and financial system, including central banks and supervisors, financial firms, companies and policy makers.”). See also NGFS Scenarios Portal.

¹⁰¹ See CDSB & SASB, [TCFD Implementation Guide: Using SASB Standards and the CDSB Framework to Enhance Climate-Related Financial Disclosures in Mainstream Reporting](#) (May 1, 2019) at 28-35.

¹⁰² Erik Landry, C. Adam Schlosser, Y. -H. Henry Chen, John Reilly, and Andrei Sokolov, [MIT Scenarios for Assessing Climate-Related Financial Risk](#), Massachusetts Institute of Technology, MIT Joint Program on the Science and Policy of Global Change, report, No. 339 (December 2019) at 7, (“The general practice in this developing field of evaluating climate-related risks is to use scenario analysis to assess potential vulnerability. A scenario is not a prediction of what will occur, but a consistent picture of how the world would develop under a specific set of assumptions. This allows the analysis to remain agnostic about the relative likelihood of the different scenarios.”)

¹⁰³ TCFD, [Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures](#) (June 2017) at 12.

¹⁰⁴ CFTC, [Managing Climate Risk in the U.S. Financial System](#) (Sept. 2020) at p. iv.

¹⁰⁵ CFTC, [Managing Climate Risk in the U.S. Financial System](#) (Sept. 2020) at 81. (“Central banks and regulators—including the Central Banks and Supervisors Network for Greening the Financial System (NGFS)—are

“the Bank of England’s Prudential Regulatory Authority (PRA) required insurers to conduct a climate risk stress test based on three scenarios and a prescribed methodology. Also, . . . it will ask major U.K. banks and insurers to estimate the size of climate change risks in three scenarios over a 30-year time horizon and consider how they would adjust their business models under each scenario. To facilitate this analysis, the Bank will provide a set of climate scenarios alongside pathways for macro-financial variables.”¹⁰⁶

Investors support disclosure of robust climate scenario analysis

Investors find that climate scenario analysis provides insights into the quality of governance as well as the degree of planning to thrive in a net zero economy. Scenario planning gives companies an opportunity to advocate for the enterprise value of their firms and support mission-critical objectives. Disclosure of climate scenario methodology and embedded key parameters offers a window into the level or rigor applied to risk assessment and management. At the same time, the process of building climate scenarios creates unique opportunities within a firm to generate crucial innovative thinking that challenges deeply held beliefs and operating assumptions about the carbon intensity of the economy. The end result should lend a clearer perspective on the company’s future and the resilience of its strategy to the risks of climate change.

The **Climate Action 100+** calls for companies to disclose in alignment with the TCFD recommendations and the sector-specific guidelines of the Global Investor Coalition on Climate Change (GIC) Investor Expectations on Climate Change,¹⁰⁷ where applicable. The initiative’s Net-Zero Company Benchmark documents its specific disclosure expectations:

“Sub-indicator 10.2 The company employs climate-scenario planning to test its strategic and operational resilience.

Metric a): The company has conducted a climate-related scenario analysis including quantitative elements and disclosed its results.

Metric b): The quantitative scenario analysis explicitly includes a 1.5° Celsius scenario, covers the entire company, discloses key assumptions and variables used, and reports on the key risks and opportunities identified.”¹⁰⁸

Investors have been vocal in demanding more granular scenario-related disclosure. In November 2020, a group of global investors (representing over \$9 trillion in assets under management) wrote letters through the Institutional Investors Group on Climate Change (IIGCC) to 36 of Europe’s largest companies calling for ‘Paris-aligned accounts’ and outline steps that the investors expect directors to take as part of this process. These steps include 1) an explanation of how critical accounting assumptions used to prepare accounts are “consistent with net zero carbon emissions in 2050, in line with the Paris Agreement” with explanations and rationale if management does not use ‘Paris-aligned’ judgements;

also moving ahead on climate risk management and scenario development (Vaze, 2019; NGFS, 2020b). The NGFS provides practical advice on scenario analysis, along with eight high-level climate scenarios (NGFS, 2020c) and detailed technical documentation and modeling data (NGFS, 2020d). The scenarios reflect different projections of future temperature targets, policies, technology development, and climate damages with an eye to providing a foundation for decision-useful analysis by both governments and private sector actors.”)

¹⁰⁶ CFTC, *Managing Climate Risk in the U.S. Financial System* (Sept. 2020) at p. 44

¹⁰⁷ The Global Investor Coalition on Climate Change has produced [reports](#) discussing investor expectations on climate change for the construction materials sector as well as real estate, steel, oil and gas, automotive, and electric utilities companies.

¹⁰⁸ Climate Action 100+, [Net-Zero Company Benchmark](#) (March 2021) at 4.

and, 2) providing sensitivity analyses for the judgments or estimates used.¹⁰⁹ Investors also require more granular scenario analysis disclosure to meet their own net zero goals. For example, members of the Net Zero Asset Managers Initiative (representing \$37 trillion in assets under management), have committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius; and to supporting investing aligned with net zero emissions by 2050 or sooner, and they require scenario analysis from companies to meet these goals.¹¹⁰

Shareholder resolutions have called for more disclosure on strategy resilience to various climate scenarios. For example, “Companies have also faced significant investor pressure for specific disclosures regarding the resilience of company portfolios and business strategies to a 2 degrees C scenario. For example, in 2015, the “Aiming for A” coalition filed shareholder resolutions with Shell, Statoil and BP that sought a broad range of increased climate disclosures. Recognizing the importance of these issues, the boards of these companies endorsed the resolutions, and each of these resolutions passed with more than 98% of shareholder support. In 2016 in the United States, shareholder resolutions focused on requiring 2 degrees C scenario analysis received the highest levels of investor support for climate risk resolutions even in the face of management opposition to the resolutions.”¹¹¹

Companies have begun integrating climate scenario analysis - at varying levels of scope, quality and transparency - into business planning.

Companies typically disclose information from climate change scenario planning via sustainability reports and stand-alone reports. Ceres reviews of corporate practice on climate scenario analysis in the electric power¹¹², oil and gas¹¹³ and automobile¹¹⁴ sectors have revealed a number of examples of climate scenario analysis being integrated into planning by large issuers. This includes AES¹¹⁵, ConocoPhillips¹¹⁶, Unilever¹¹⁷, Occidental, and others.

Existing efforts are not meeting the needs of investors, due to a lack of comprehensive disclosure.

Today, many companies’ disclosures about scenario analyses tend to be incomplete and lacking key details on inputs and assumptions. This prevents robust investor analysis of issuers’ plans and strategies. In addition, the use of different scenarios prevents comparison of outcomes across issuers and sectors. Without consistency and transparency as to the assumptions used, there is little basis for confidence in either the quality of the company’s earnings today or the company’s ability to thrive, or even survive, in a net zero environment.

¹⁰⁹ IIGCC, [Template letter to European companies “Investor Expectations for Paris-Aligned Accounts”](#) (November 2020); see also IIGCC, [Leading investors call on Europe’s largest companies to address missing climate change costs in financial accounts](#) (November 11, 2020)

¹¹⁰ Net Zero Asset Managers Initiative, [“Q&A”](#).

¹¹¹ See Amy Myers Jaffe, [A Framework For 2 Degrees Scenario Analysis: A Guide For Oil And Gas Companies and Investors for Navigating the Energy Transition](#), Ceres (March 2017) at 29; See also Bradley Olson and Nicole Friedman, [Exxon, Chevron Shareholders Narrowly Reject Climate-Change Stress Tests](#) (May 25, 2016).

¹¹² Ceres, [Climate Strategy Assessments for the U.S. Electric Power Industry: 2019 Update](#), (August 2019)

¹¹³ Ceres, [A Framework For 2 Degrees Scenario Analysis: A Guide For Oil And Gas Companies and Investors for Navigating the Energy Transition](#) (March 2017)

¹¹⁴ Ceres, [Automaker Roadmap for Climate Scenario Analysis](#) (October 2020)

¹¹⁵ AES, [2021 Climate Scenario Report](#).

¹¹⁶ ConocoPhillips, [“Scenario Planning”](#).

¹¹⁷ Unilever, [Reporting on 2 and 4 degree scenario analysis](#), TCFD Case Study; See also [Unilever Annual Report 2017](#) at 32.

An MIT paper on climate scenario analysis reports by oil and gas companies confirmed these weaknesses.¹¹⁸ It found that “climate-related reports are of limited use to investors for three reasons.” First, scenarios used lack comparability across companies. Second, even when companies use published reference scenarios, the disclosures often lack critical information necessary to interpret them, such as the time frame, discount rate and price assumptions used. Third, many scenario analyses are incomplete in scope. For example, they may analyze vulnerabilities but fail to address preparedness, or vice versa. The good news is that, as the paper suggests, “[f]ew companies exhibit all three shortcomings.”¹¹⁹ The paper continues:

The relative sophistication of each company in one or another aspect of disclosure suggests that clear, comparable, and consistent climate-related disclosures are, in fact, attainable. If all companies were willing to match their peers in the areas where their peers provided strong disclosure, the field would take a giant leap forward.¹²⁰

Ceres studies examining corporate practice in scenario analysis also found weaknesses, including that the vast majority:

- 1) are not linked to financial statements¹²¹;
- 2) do not use standard scenarios, preventing comparison across companies;¹²²
- 3) do not disclose assumptions underlying the scenarios.^{123 124}

These weaknesses must be urgently addressed. As the world advances the energy transition, for example, energy providers and users need to use scenario analysis to evaluate the sensitivity of their respective financial results, positions, and cash flows to changes in demand and regulatory interventions.

¹¹⁸ See MIT, [Climate-Related Financial Disclosures: Use of Scenarios](#) (Nov. 5, 2019) at 25.

¹¹⁹ *Id.*

¹²⁰ *Id.*

¹²¹ See for example, Ceres scenario analysis industry best practice reports: [Automaker Roadmap for Climate Scenario Analysis](#) (October 2020); [A Framework For 2 Degrees Scenario Analysis: A Guide For Oil And Gas Companies and Investors for Navigating the Energy Transition](#) (January 2017); [Climate Strategy Assessments for the U.S. Electric Power Industry: 2019 Update](#), (August 2019).

¹²² The status quo contravenes the view of the CFTC Climate Subcommittee: “On the other hand, regulators need consistent approaches across firms so they can ensure risks are responsibly analyzed and reported. Investors would benefit from better comparability across scenario-related disclosures. To achieve a balance across these needs, regulators, in consultation with the firms they regulate, should specify key assumptions, scope, and the outputs they expect.” CFTC, [Managing Climate Risk in the U.S. Financial System](#) (Sept. 2020) at 83.

¹²³ See Amy Myers Jaffe, [A Framework For 2 Degrees Scenario Analysis](#), Ceres (March 2017) at 27. (Finding for example that “ConocoPhillips has a well-developed 2 degrees scenario framework in place and has begun to disclose more information about its process, the company’s formal disclosure to investors lags that of some other peers such as Total and Statoil. The ConocoPhillips disclosure information lacks specificity regarding many of its underlying assumptions and how its analysis has informed specific changes in corporate strategies. This lack of transparency makes it difficult for investors to evaluate how well ConocoPhillips is positioned to address climate risk.”)

¹²⁴ These gaps have also been documented by TCFD, Ceres, and a range of other groups. For example, in its 2020 Status Report, the TCFD found “Strategy c)” to be the least implemented recommended disclosure. Only one in 15 companies reviewed disclosed information on the resilience of their strategies. The review found that the percentage of companies disclosing the resilience of their strategies, taking into consideration different climate-related scenarios, including a 2°C or lower scenario (Strategy c) was significantly lower than that of any other recommended disclosure in each year. See Task Force on Climate-related Financial Disclosures, [Implementation Progress Report](#) (2020)

To date, though, most companies' disclosed scenario analyses provide limited insight. Much of what is disclosed are largely assertions--lacking supporting methodologies and calculations--that under a comfortable range of possible technology and policy pathways the companies' strategies will be viable. These companies risk material misstatements or omissions in their current financial reports, as well as potentially materially misguided strategies for the future.¹²⁵

The weaknesses above may also prevent companies from meeting existing auditing requirements. As noted in a recent Ceres report, *Lifting the Veil*,¹²⁶ investors expect auditors to ensure - in an era of significant climate pledges and changes in public sentiment or demand from policies and regulations related to energy transition - that corporate financial statements are accurate with respect to reported asset values, asset impairment losses, changes in estimated useful lives of assets, and the timing and amount of asset retirement obligations. For example, if an underlying strategy that is dependent on negative emissions needs to shift to more significant near-term emission reductions, such strategic changes could trigger asset impairments and new charges for asset retirement obligations (AROs). If so, as discussed above, significant assumptions about future emissions, negative emissions and carbon prices must be clearly and explicitly disclosed.

Scenario disclosure weaknesses could also prevent investors from exercising their fiduciary duty to ensure issuers are prepared to respond to climate risk¹²⁷, and ultimately, weaknesses in disclosures relating to issuer scenario analysis undermine the SEC's mission to protect investors. Recent examples illustrate the potential for financial losses by issuers and investors, including the energy crisis in Texas that cost many lives and billions in infrastructure damage¹²⁸, and the PG&E climate-induced wildfire crisis that led to many deaths, the company's bankruptcy and billions in damages.¹²⁹

Only by addressing gaps in scenario analysis disclosure can the SEC help to address the significant, systemic risks identified by U.S. financial regulators as requiring urgent attention.¹³⁰ Financial regulators have identified the lack of adequate climate risk data in the market as a significant obstacle to addressing systemic and "sub-systemic" risks and, if not quickly addressed, preventing the risk management strategies aimed at avoiding significant financial losses throughout the financial system.

¹²⁵ Samantha Ross, Center for American Progress, [The Role of Accounting and Auditing in Addressing Climate Change](#) (March 1, 2021)

¹²⁶ Ceres, *Lifting the Veil: Investor Expectations for Paris-aligned Financial Reporting at Oil and Gas Companies* (forthcoming).

¹²⁷ For example, when Xcel Energy announced new goals to reduce its carbon emissions 80 percent by 2030 from 2005 levels and deliver 100 percent carbon-free electricity to customers by 2050, it excluded scenarios that assumed the availability of significant negative emissions in the electric power sector, deeming such technologies to not be commercially available. As a result, the scenarios selected by Xcel Energy . . . required more significant near-term emission reductions to compensate for the lack of negative emission technologies. While there were challenges related to the availability of reference scenarios, this illustrates the need for granular and clear explanations of these issues to investors. See also, Ceres, [Climate Strategy Assessments for the U.S. Electric Power Industry: 2019 Update](#) (August 2019) at 12.

¹²⁸ Texas Monthly, [The Texas Blackout Is the Story of a Disaster Foretold](#) (February 19, 2021); see also Environmental Defense Fund, [A clear path to protecting Texas from the next weather crisis](#) (February 25, 2021)

¹²⁹ New York Times, [How PG&E Ignored Fire Risks in Favor of Profits](#) (March 18, 2019); see also New York Times, [PG&E Pleads Guilty to 84 Counts of Manslaughter in Camp Fire Case](#) (June 16, 2020)

¹³⁰ Politico, [Janet Yellen: Climate change poses 'existential threat' to financial markets](#) (March 31, 2021)

For these reasons, we recommend that the SEC amend Regulation S-X to require disclosure of a net zero scenario analysis that standardizes disclosure related to the parameters, assumptions, analytical choices and impacts used in the analysis.

This analysis should be assured and provided in a supplemental schedule to the financial statements. The SEC should draw from the TCFD's resource of "Key Considerations: Parameters, Assumptions, Analytical Choices, and Impacts" in its scenario analysis guidance.^{131 132} A model for the mandatory schedule could be the existing optional sensitivity table provided for in Regulation S-K, Par 1202, as a supplement to the mandatory standard measure for oil and gas reserves.¹³³ The new schedule will allow investors to compare companies' financial position and results under standardized net zero assumptions and discern whether and how much of the company's current assets could become stranded as the economy decarbonizes. We recommend that the SEC also reference the extensive suite of TCFD tools to support scenario analysis.¹³⁴

There are many resources available to the SEC for providing issuers guidance on conducting scenario analyses. Ceres has been working to study and identify best practices in conducting climate scenario analysis for a number of sectors, in order to support investors and companies to undertake effective climate risk management and disclosure. We recommend that the Commission draw from Ceres' Scenario Analysis roadmaps and guides for expected and feasible practice for the electric power¹³⁵, oil and gas¹³⁶ and automobile¹³⁷ industries. Following the recommendation of the CFTC Climate Risk Subcommittee, we also recommend that the Commission engage in an inter-agency process to

¹³¹ TCFD, [Technical Supplement The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities](#) at 8-9. "Organizations are encouraged to disclose the approach used for selecting scenarios used as well as the underlying assumptions for each scenario regarding how a particular pathway might develop (e.g., emergence and deployment of key technologies, policy developments and timing, geopolitical environment around climate policies). This information will be important for an organization to disclose and discuss, including the sensitivity of various assumptions to changes in key parameters such as carbon prices, input prices, customer preferences, etc., so that investors and other stakeholders have a clear understanding of the scenario process— not only the outcomes each scenario describes, but the pathway envisioned by an organization that leads to that outcome (i.e., the how and why of those outcomes). Transparency around key parameters, assumptions, and analytical choices will help to support comparability of results between different scenarios used by an organization and across organizations. In turn, this will support the evaluation, by analysts and investors, of the robustness of organizations' strategies across a range of plausible impacts, thereby supporting better risk and capital allocation decisions."

¹³² In line with TCFD guidance, the Commission might consider approaches to accommodate varying levels of issuer experience with climate scenario analysis. For example: "Organizations just beginning to use scenario analysis may choose to start with qualitative scenario narratives or storylines to help management explore the potential range of climate change implications for the organization.¹¹ As an organization gains experience with qualitative scenario analysis, the scenarios and associated analysis of development paths can use quantitative information to illustrate potential pathways and outcomes. For organizations with significant experience conducting scenario analysis, greater rigor and sophistication in the use of data sets and quantitative models and analysis may be warranted." (2017 TCFD technical supplement)

¹³³ In any event, this optional sensitivity analysis should be retooled for the oil and gas industry to be mandatory and provide for at least one standardized set of potential net zero commodity and carbon price assumptions.

¹³⁴ <https://www.tcfhub.org/scenario-analysis/>

¹³⁵ Ceres, [Climate Strategy Assessments for the U.S. Electric Power Industry: 2019 Update](#) (August 2019)

¹³⁶ Ceres, [A Framework For 2 Degrees Scenario Analysis: A Guide For Oil And Gas Companies and Investors for Navigating the Energy Transition](#) (January 2017)

¹³⁷ Ceres, [Automaker Roadmap for Climate Scenario Analysis](#) (October 2020)

coordinate work on “a consistent and common set of broad climate risk scenarios, guidelines, and assumptions.”¹³⁸

This is why the TCFD recommends that “all organizations consider applying a basic level of scenario analysis in their strategic planning and risk management processes. Organizations more significantly affected by transition risk (e.g., fossil fuel-based industries, energy-intensive manufacturers, and transportation activities) and/or physical risk (e.g., agriculture, transportation and building infrastructure, insurance, and tourism) should consider a more in-depth application of scenario analysis.”¹³⁹

How does the absence or presence of robust carbon markets impact firms’ analysis of the risks and costs associated with climate change?

The CFTC Climate-Related Market Risk Subcommittee found in September 2020 that “financial markets will only be able to channel resources efficiently to activities that reduce greenhouse gas emissions if an economy-wide price on carbon is in place at a level that reflects the true social cost of those emissions.”¹⁴⁰ Research shows that delay in implementing a carbon price could result in a higher carbon price path later on relative to one implemented earlier.¹⁴¹ Moreover, efforts to mitigate climate change by internalizing externalities directly increase transition risks for incumbent fossil fuel industries.¹⁴² Nevertheless, even in the absence of robust carbon markets, “[c]ompanies are increasingly taking into account the cost of carbon in their business plans” reflecting the fact that many companies “are facing or *already* face, carbon-pricing regulation.”¹⁴³ CDP reports that more than 2,000 companies now disclose current or planned use of internal carbon pricing, and “more than half (226) of the world’s 500 biggest

¹³⁸ CFTC Report: “Recommendation 6.6: Prescribe a consistent and common set of broad climate risk scenarios, guidelines, and assumptions and mandate assessment against these scenarios, as described in Chapter 4. Regulators, in consultation with industry participants, external experts, and other stakeholders, should develop and prescribe a consistent set of broadly applicable scenarios, guidelines, and assumptions and require institutions to assess their exposure to those scenarios. Climate scenarios should be both plausible and relevant, all the while informed by climate science. Regulators should require a range of climate scenarios, including scenarios covering severe but plausible outcomes. Key assumptions (including policy pathways) and limitations should be transparent. Scenarios, assumptions, and guidelines should be updated as relevant factors are better understood and as policy and technology evolve. There should be a recognition that climate risk will manifest differently across various parts of the financial system.” CFTC, *Managing Climate Risk in the U.S. Financial System* (Sept. 2020) at 83.

¹³⁹ For this purpose, TCFD provides useful disclosure metrics for the energy sector: See TCFD, [Energy Group Metrics – Illustrative Examples](#)

¹⁴⁰ CFTC, *Managing Climate Risk in the U.S. Financial System* (Sept. 2020).

¹⁴¹ Frederick Van Der Ploeg and Armon Rezai, *The risk of policy tipping and stranded carbon assets*, J. Env. Econ. & Mgmt (2020). This study finds that: If global warming is to stay below 2 °C, there are four risks of assets stranding. First, substantial fossil fuel reserves will be stranded at the end of the fossil era. Second, this is true for exploration capital too. Third, unanticipated changes in present or expected climate policy cause discrete jumps in today's valuation of physical and natural capital. Fourth, if timing and intensity of climate policy are uncertain, revaluation of assets occurs as uncertainty about future climate policy is resolved.

¹⁴² Gregor Semieniuk, et. al., SOAS Department of Economics, *Low-carbon transition risks for finance* (March 2020). For example, to limit global warming to 1.5°C, the IPCC estimates that median global carbon prices are required to reach \$91/tCO₂ in 2025 and \$179/tCO₂ in 2030 (IPCC 2018). Id. at 7. See also [Ceres Addressing Climate as a Systemic Risk report, fossil fuel appendix].

¹⁴³ Garnet Roach, *More companies factoring carbon price into business risk*, Corp. Sec. (Apr. 21, 2021) (citing CDP data that “in just five years there has been an 80 percent increase in the number of companies using – or planning to use – an internal carbon price”).

companies by market capitalization are now putting a price on carbon or planning to do so within the next two years.”¹⁴⁴ As discussed above in Part I, we believe that, if use of internal emissions pricing plays a material role in a company’s business strategies, Regulation S-K should make clear that that role should be disclosed, so that investors have a clear understanding of whether and, if so, how internal emissions pricing supports the quality of the company’s earnings, e.g., by preparing its activities and strategies for a low-carbon economic environment.

Question Set 3: What are the advantages and disadvantages of permitting investors, registrants, and other industry participants to develop disclosure standards mutually agreed by them? Should those standards satisfy minimum disclosure requirements established by the Commission? How should such a system work? What minimum disclosure requirements should the Commission establish if it were to allow industry-led disclosure standards? What level of granularity should be used to define industries (e.g., two-digit SIC, four-digit SIC, etc.)?

Considering voluntary disclosure frameworks outside the context of SEC filings, investors and companies find them extremely useful. The frameworks have come far, in part, through investor-corporate collaboration and extensive stakeholder input, and by working out technical challenges to measurement and disclosure. We recognize and appreciate the value of the various voluntary standard setters and the thousands of companies that have been working with them in the United States and around the world. They will remain invaluable to companies, investors, employees, community members and other stakeholders.

However, the Commission should not use voluntary disclosure frameworks as they are currently constituted to satisfy minimum SEC disclosure requirements. As discussed in the answer to Question 5, voluntary frameworks receive far less public input than SEC rulemakings or requests for comments. Voluntary frameworks are also not subject to the same due process requirements as SEC rulemakings.

We do not believe the SEC should defer to industry-led disclosure standards. Private ordering will continue to be available, and as long as industry-led bodies do not produce misleading disclosure standards, companies are free to use them. But deference to an industry-led body exclusively could harmfully signal that companies are also free to put the private interests of management ahead of investor and market needs. Moreover, deference could undermine investor-led engagement to articulate superior, and more comparable, disclosures. We believe the inadequacy of climate disclosure today is in large part due to the Commission’s deference to companies’ determinations of what is material to them. Instead of industry-led disclosure efforts, standards should be developed based on the involvement of all relevant stakeholders, including investors, registrants, and the public.

Since we do not believe that the SEC should defer to an industry-led disclosure framework, we do not believe it would be constructive for the SEC to articulate minimum disclosure requirements for such a framework to satisfy. Climate change presents profound, systemic risks to our capital markets. It would not serve the public interest for the SEC to delegate development of the disclosure requirements needed to mitigate those risks to industry-led groups.

¹⁴⁴ Nicolette Bartlett, Interim Director, Tom Coleman, Project Manager, Climate Change and Stephan Schmidt, Data analysis and report writing contributor, CDP, *Putting a price on carbon: the state of internal carbon pricing by corporates globally* (April 2021) at 4.

If the SEC considers such a delegation, rather than ask the public for ideas on how to do so, we believe the SEC should first conduct an economic study of the risks of doing so. That study should take into account the SEC's experience with industry-led accounting and auditing standard setting and its contribution to financial reporting failures, from McKesson & Robbins in the 1930s through the current day.

Question Set 4: What are the advantages and disadvantages of establishing different climate change reporting standards for different industries, such as the financial sector, oil and gas, transportation, etc.? How should any such industry-focused standards be developed and implemented?

Our recommendations in Part I of this response apply to all companies, with the exception of recommendation #8, industry specific metrics and guidance. As our recommendations demonstrate, our position is that investors require some standardized disclosures from all companies as well as industry-specific disclosures. Our recommendations to require that every company disclose their GHG emissions and capex budget allocations to prepare for the energy transition and for climate adaptation, as well as to provide an assured net zero scenario analysis, will elucidate the specific risks to companies' respective financial positions and quality of earnings.

Different sectors face different challenges in making the low-carbon transition, including where emissions are concentrated in their value chain and how costly it is to reduce emissions, and so the nature and content of their disclosures should be different.¹⁴⁵ Whereas business models, supply chains, products and financing needs in many industries will be affected by climate change, the energy transition and changes in consumer preferences, certain industries also face the collapse of asset values, if not managed. One research paper has found that stranding of assets mostly affects the 20 largest oil, gas and coal companies but also affects carbon-intensive industries like steel, aluminum, cement and plastics.¹⁴⁶

¹⁴⁵ The [Transition Pathways Initiative](#) (TPI) and the [Science-based Targets Initiative](#) (SbTI) both take a sector approach for this reason. TPI is an asset manager-led initiative that identifies gaps in data that companies should be disclosing to enable their shareholders to make informed, robust decisions about transition risk. It is supported by 105 investors with \$26T in assets under management and focuses on assessing sectors contributing most significantly to greenhouse gas emissions. About 400 publicly-listed companies across 16 high carbon sectors have been analyzed by TPI, including coal mining, oil and gas, electric utilities, autos, aviation, shipping, steel, cement, paper, aluminium and chemicals. SbTI defines and promotes best practice in emissions reductions and net-zero targets in line with climate science, provides technical assistance to companies who set science-based targets in line with climate science, provides companies with independent assessment and validation of targets, and leads the [Business Ambition for 1.5°C campaign](#), mobilizing companies to set science-based targets in line with a 1.5°C future. SBTi is a partnership between CDP, World Resources Institute, the World Wide Fund for Nature, and the United Nations Global Compact. Setting science-based targets via the SBTi is also one of the [We Mean Business](#) Coalition commitments.

¹⁴⁶ As researchers Rick van der Ploeg of Oxford and Armon Rezai of Vienna University of Economics of Business have explained, "Assets in the fossil fuel industries are at risk of losing market value due to unanticipated breakthroughs in renewable technology and governments stepping up climate policies in light of the Paris commitments to limit global warming to 1.5 or 2°C. Stranded assets arise due to uncertainty about the future timing of these two types of events and substantial intertemporal and intersectoral investment adjustment costs. Stranding of assets mostly affects the 20 biggest oil, gas, and coal companies who have been responsible for at least one-third of global warming since 1965, but it also affects carbon-intensive industries such as steel, aluminum, cement, plastics, and greenhouse horticulture. A disorderly transition to the carbon-free economy will lead to stranded assets and legal claims. Institutional investors should be aware of these financial risks." Rick van der Ploeg and Armon Rezai,

As we discuss below, the SEC should update and expand its industry-specific disclosure requirements to incorporate material, industry-specific climate-related metrics. Some amendments, such as those regarding oil and gas company reserves, can and should be made immediately.

Industry-specific requirements are not only responsive to investor requests made of the SEC¹⁴⁷, but to extensive evidence that climate change poses different material risks to different industries. Many of those risks have been captured in industry-specific guidance from voluntary climate disclosure frameworks. However, there are cases in which voluntary disclosure frameworks do not yet capture important elements of climate risks to specific industries. Currently, several reporting standards do not sufficiently contend with Scope 3 emissions or emissions caused by land use change. In industries directly affecting deforestation and land use change, we recommend the SEC establish reporting standards tailored to those industries, so that the unique risks posed by deforestation and land use change can be adequately addressed where they are most prevalent.

We recommend that the SEC staff monitor filings closely to determine whether companies are providing sufficient specificity about the impacts of climate change and the energy transition on their industry and their business. These filing reviews can and should press companies beyond industry-specific boilerplate to provide company-specific impacts in light of the company's industry and business model. In addition, we believe the expert advisory group that we recommend that the SEC establish will help the SEC identify industry-specific disclosure weaknesses.

Question Set 5: What are the advantages and disadvantages of rules that incorporate or draw on existing frameworks, such as, for example, those developed by the Task Force on Climate-Related Financial Disclosures (TCFD), the Sustainability Accounting Standards Board (SASB), and the Climate Disclosure Standards Board (CDSB)?

We recommend that the SEC incorporate the TCFD framework into SEC rules, while drawing on other voluntary climate disclosure frameworks for specific issues or metrics. The advantages of drawing on existing frameworks far outweigh any disadvantages, because of the quality of existing reporting principles and metrics, as demonstrated by their current usage by companies, and their usefulness to investors. This applies equally to the most widely used reporting frameworks or questionnaires¹⁴⁸, and others that companies and investors find helpful.¹⁴⁹

One indicator of the quality of the frameworks is their widespread use by companies over many

Stranded Assets in the Transition to a Carbon-Free Economy, Annual Review of Resource Economics, Vol. 12, Issue 1, pp. 281-298 (2020).

¹⁴⁷ See, e.g., Ceres letter from 61 institutional investors, representing \$1.9 trillion in assets under management, dated April 17, 2015, asking that SEC staff scrutinize disclosures in annual filings by oil and gas companies regarding carbon asset risks, and provide comments to these issuers that address reduced demand scenarios, risks associated with capital expenditures on high cost unconventional resource projects and associated stranded asset risks.

¹⁴⁸ These include, for example, reporting frameworks or questionnaires from the TCFD, Global Reporting Initiative, Sustainability Accounting Standards Board, the Climate Disclosure Standards Board, CDP and International Integrated Reporting Council.

¹⁴⁹ Examples include GRESB, the Global ESG Benchmark for Real Assets, PCAE, The Partnership for Carbon Accounting Financials, the PCTA/Climate Scenario Analysis Program, and the ResponsibleSteel Standard, which includes provisions about corporate commitments to achieve the goals of the Paris Agreement, climate-related financial disclosure, and GHG emissions measuring, reduction target, and reporting and disclosure.

years. Both the Global Reporting Initiative (GRI) and CDP have refined their frameworks over about two decades. The GRI is the most widely used framework globally, and the GRI sustainability reports database includes reports from over 15,000 organizations and over 38,000 GRI reports.¹⁵⁰ Over 2,500 North American companies disclose through CDP on climate change, water security and forests issues, out of a total of 9,600 companies globally.¹⁵¹

Other advantages regarding current frameworks include the opportunities they provide for stakeholder input, their usefulness to investors and companies, and in some cases, their focus on financial filings. A few examples illustrate these points, although it is beyond the scope of this letter to exhaustively examine each of these principles as they apply to each framework or questionnaire.

Widely used frameworks provide ongoing and periodic opportunities for stakeholder input. For example, GRI has a 48-member global Stakeholder Council to advise its Board, which is composed of members representing the core constituencies in GRI's network: business, civil society organizations, investment institutions, labor and mediating institutions. From December 2018 to March 2019, GRI [received](#) 158 public comments from various constituencies, including 17 U.S. investment institutions, for its sustainability reporting tax standard.

These frameworks have also proven their usefulness to investors. For example, more than 225 asset owners and asset managers, representing approximately \$72 trillion in assets under management across Asia, Europe, the Middle East, North America, and South America participate in the SASB Alliance, or have [licensed](#) SASB Standards for use in investment tools and processes. SASB also demonstrates investor usage through [case studies](#) and investor advisory group [membership](#).¹⁵² 590 institutional investors with over \$110 trillion ask companies to annually disclose their environmental data through CDP.¹⁵³

These frameworks are also useful to companies. As of 2017, 374 companies in 32 countries, with a market cap of \$5.2 trillion, used the CDSB framework.¹⁵⁴ Since 2019, SASB has found 778 unique reporting companies.¹⁵⁵ As discussed above, thousands of companies use the GRI standards for sustainability reporting and/or respond to the CDP's questionnaires.

A final, important advantage of incorporating or drawing on existing frameworks is their focus on financial filings. Several frameworks, including those from CDSB, SASB, TCFD and the International Integrated Reporting Council (IIRC) were designed with financial filings in mind.

An important difference between existing frameworks and SEC rulemaking is the extent of public input they receive. The SEC's proposed rules and concept releases typically receive more input from issuers, investors and other stakeholders than voluntary disclosure frameworks' requests for information. This is due to the SEC's outsized impacts on issuers, investors and U.S. capital markets, and the SEC's abilities to influence the actions of capital markets regulators worldwide.

¹⁵⁰ [GRI Sustainability Disclosure Database](#).

¹⁵¹ CDP, "[What we do](#)".

¹⁵² Janine Guillot, Chief Executive Officer, Sustainability Accounting Standards Board, [letter in response to SEC request for information on climate change disclosures](#) (May 19, 2021).

¹⁵³ CDP, "[Why disclose as a company](#)".

¹⁵⁴ CDSB, [Infographic: CDSB Framework users](#) (December 1, 2017).

¹⁵⁵ SASB, "[Global Use of SASB Standards](#)".

The large numbers of comments the SEC receives on rulemaking and concept releases provides evidence for their importance. To cite two examples, in response to the SEC's April 13, 2016 [Concept Release](#), Business and Financial Disclosure Required by Regulation S-K, the SEC received 26,512 comments.¹⁵⁶ Of those, 10,113 comments covered climate, environmental, and other ESG disclosures.¹⁵⁷ In response to a petition asking the SEC to require disclosure of how public companies spend investor money on politics, more than 1.2 million individuals and organizations wrote to the SEC in support of that petition.¹⁵⁸

The voluntary climate disclosure frameworks have built a strong foundation for the SEC. With stakeholder input through rulemaking, the SEC can draw on the frameworks for both broad and industry-specific climate disclosure metrics and principles for use in financial filings.

Are there any specific frameworks that the Commission should consider? If so, which frameworks and why?

As discussed in Part I, we recommend that the SEC incorporate the 11 recommendations of the TCFD into Regulation S-K. This is based on the TCFD's credibility, its high levels of use and acceptance by investors, companies, government and other stakeholders, and the relevance of the TCFD's recommendations to securities laws.

The TCFD was created after G-20 nations--specifically Finance Ministers and Central Bank Governors--asked the Financial Stability Board (FSB) to review how the financial sector can take account of climate-related issues. After that review, the FSB decided to establish the TCFD to develop recommendations for more effective climate-related disclosures, which it released in 2017.¹⁵⁹ Over 2,000 organizations, including companies and investors, are supporters of the TCFD as of March 2021.¹⁶⁰ These organizations have a market capitalization of over \$19.8 trillion, which includes over 859 financial firms that are responsible for assets of \$175 trillion.¹⁶¹

Investor use and acceptance of the TCFD

The TCFD's high levels of use and acceptance by investors should be important to the SEC's consideration of the merits of this framework, because of the SEC's mission to protect investors. Perhaps the clearest signal of investor acceptance of the TCFD is the 2019 Global Investor Statement to Governments on Climate Change, which was signed by 631 institutional investors managing more

¹⁵⁶ Tyler Gellasch, American Federation of Labor-Congress of Industrial Organizations (AFL-CIO), Americans for Financial Reform, Center for American Progress (CAP), Ceres, the Financial Accountability and Corporate Transparency (FACT) Coalition, the International Corporate Accountability Roundtable (ICAR), the Patriotic Millionaires, Public Citizen, and US SIF: The Forum for Sustainable and Responsible Investment, [Towards a Sustainable Economy: A Review of Comments to the SEC's Disclosure Effectiveness Concept Release](#) (September 2016) at 15.

¹⁵⁷ [Towards a Sustainable Economy](#) at 21. The report adds, "10,070 commenters expressed clear support for enhanced disclosures, while just 43 commenters expressed oppositional or more ambiguous views." Id.

¹⁵⁸ SEC Commissioner Robert J. Jackson, Jr., [letter](#) to Rep. Carolyn B. Maloney, Chair, Subcommittee on Investor Protection, Entrepreneurship, and Capital Markets, U.S. House of Representatives (November 18, 2019) at 1.

¹⁵⁹ TCFD, [Task Force on Climate-related Financial Disclosures Overview](#) (March 2021) at 6.

¹⁶⁰ Id. at 32.

¹⁶¹ Id.

than \$37 trillion in assets.¹⁶² The investors' TCFD endorsement was comprehensive, asking governments around the world to commit to improving climate-related financial reporting, by taking the following steps:

- “Publicly support the Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD) recommendations
- Commit to implement the TCFD recommendations in their jurisdictions, no later than 2020
- Request the FSB incorporate the TCFD recommendations into its guidelines
- Request international standard-setting bodies incorporate the TCFD recommendations into their standards.”

Since its launch in December 2017, investor members of the Climate Action 100+ initiative have asked companies to “provide enhanced corporate disclosure in line with the final recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).”¹⁶³ Most recently, the 575 investor members of the initiative, representing \$54 trillion in assets, have created a Net Zero Benchmark with a TCFD disclosure indicator, which measures whether the company “has committed to implement the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).”¹⁶⁴

Work by the largest asset management firms indicate that the TCFD is squarely mainstream in the investment community. Vanguard has made clear its expectation that companies consider the TCFD for their climate change disclosure,¹⁶⁵ while BlackRock and State Street Global Advisors have gone further, making the TCFD an engagement priority for companies in which they invest.¹⁶⁶

Company use and acceptance of the TCFD

Many companies use the TCFD recommendations and reports to inform their thinking about climate change and to structure and guide their disclosures. Companies use the TCFD for stand-alone reports, annual reports, sustainability reports and securities filings.

Research has found that TCFD usage by large and mid-cap companies is commonplace. The TCFD found that on average across the TCFD recommendations, 42% of companies with a market capitalization greater than \$10 billion disclosed at least some information in line with each individual TCFD recommendation in 2019.¹⁶⁷ Almost 60% of the world’s 100 largest public companies support the TCFD, report in line with the TCFD recommendations, or do both.¹⁶⁸

¹⁶² Ceres press release, [Record 631 institutional investors managing more than \\$37 trillion in assets urge governments to step up ambition to tackle global climate crisis](#) (December 9, 2019).

¹⁶³ Climate Action 100+, [“About Climate Action 100+”](#) and [“The Three Asks”](#).

¹⁶⁴ Climate Action 100+, [Net Zero Company Benchmark \(A framework to assess focus companies based on their publicly disclosed information\)](#) (March 2021),

¹⁶⁵ Vanguard, Investment Stewardship Insights, [Climate risk governance: What Vanguard expects of companies and their boards](#) (June 2020).

¹⁶⁶ State Street Global Advisors, [Our Asset Stewardship Approach](#) (May 2020); [BlackRock, Commentary: BlackRock Investment Stewardship’s approach to engagement on climate risk](#) (January 2020); BlackRock, [Commentary: BlackRock Investment Stewardship’s approach to engagement on the TCFD and the SASB aligned reporting](#) (January 2020).

¹⁶⁷ Financial Stability Board, [2020 Status Report: Task Force on Climate-related Financial Disclosures](#) (October 29, 2020).

¹⁶⁸ Id.

In a KPMG study, significant portions of large and mid-cap corporations in 52 countries use the TCFD. KPMG found that 18% of N100 companies state that they report in line with the TCFD recommendations, as do 37% of G250 companies.¹⁶⁹

The SEC should consider that while a growing number of companies use the TCFD, reporting quality varies. One study found that the TCFD recommendations did not have a significant impact on the disclosure of TCFD-supporting companies, and disclosures on strategy and metrics and targets lag other TCFD disclosure categories.¹⁷⁰

Reporting quality varies in part because companies' use of TCFD varies, because it is a voluntary framework and the TCFD does not prescribe how it should be used. Some companies make modest changes to their voluntary reporting based on the TCFD and add a TCFD index to their sustainability report or website. Others undergo an in-depth, firm-wide process over many months to understand the implications of climate change risks, opportunities, governance, disclosure, etc. for the company and release a detailed report with a plan for next steps. Clear disclosure rules from governments, discussed in the next section, can provide companies clear expectations about how to use the TCFD recommendations and what to disclose in securities filings. This will further lay the groundwork for these disclosures to be audited according to rigorous standards established by the Public Company Accounting Oversight Board at the reasonable assurance level, which would significantly reinforce the usefulness of any reported information to investors.

Governments' use and acceptance of the TCFD

In the U.S., a growing number of financial regulators have announced actions related to the TCFD. For several years, insurance commissioners in six states have allowed insurers to respond to the National Association of Insurance Commissioners (NAIC) climate disclosure questionnaire with a TCFD report.¹⁷¹ There is a growing group of insurers that use the TCFD for their complying with the NAIC questionnaire. For 2022, the NAIC is considering whether to integrate the TCFD framework into the NAIC questionnaire, or replace it with a TCFD reporting requirement.¹⁷²

In 2020, the New York State Department of Financial Services (NY DFS) sent letters about the financial risks of climate change to all New York-regulated domestic and foreign insurance companies, banking organizations, branches and agencies of foreign banking organizations, mortgage bankers and servicers, limited purpose trust companies, and New York-regulated non-depositories outlining its expectations related to addressing the financial risks from climate change.¹⁷³ The letters discussed the NY DFS' expectations that these companies "start developing their approach to climate-related

¹⁶⁹ KPMG, [The time has come: The KPMG Survey of Sustainability Reporting 2020](#), KPMG IMPACT (December 2020) at 39. "N100" is the top 100 companies by revenue in each of the 52 countries in the KPMG study, totalling 5,200 companies. Id. at 4. "G250" is the world's 250 largest companies by revenue as defined in the Fortune 500 ranking of 2019. Id. at 4.

¹⁷⁰ Julia Anna Bingler, Mathias Kraus, Markus Leippold, Cheap Talk and Cherry-Picking: [What ClimateBert has to say on Corporate Climate Risk Disclosures](#) (March 2, 2021) at 18.

¹⁷¹ California Department of Insurance, Press Release: [U.S. Insurance Departments Report Progress Toward Consistent Global Standards for Measuring Growing Climate Risks](#) (Nov. 24, 2020).

¹⁷² See NAIC [Climate Risk and Resiliency Resource Center](#), Climate Risk Disclosure, meeting recordings from January 27 to February 17, 2021.

¹⁷³ New York State Department of Financial Services, [Industry Letter: Climate Change and Financial Risks](#) (Oct. 29, 2020); New York State Department of Financial Services, [Insurance Circular Letter No. 15 \(2020\): Climate Change and Financial Risks](#) (September 22, 2020).

financial disclosure and consider engaging with the Task Force for Climate-related Financial Disclosures framework and other established initiatives when doing so.”¹⁷⁴ The NY DFS’ proposed guidance for insurers on managing the financial risks from climate change goes further, expecting insurers to “[d]isclose its climate risks and consider the TCFD and other initiatives when developing its disclosure approaches.”¹⁷⁵

Several governments around the globe have incorporated the TCFD into climate disclosure guidance and are beginning to incorporate it into rules.¹⁷⁶ This includes planning to issue climate disclosure regulations (Brazil, Hong Kong, New Zealand, United Kingdom, Switzerland), incorporating it into climate disclosure guidance (Australia, European Union, Japan, Singapore), recommending the incorporation of the TCFD into guidance (South Africa), endorsing the TCFD (Ireland’s Minister for Finance), and establishing COVID-19 relief financing to large employers that is partly contingent on these companies publishing TCFD-aligned disclosures (Canada).¹⁷⁷ On April 13, 2021, New Zealand introduced a bill that requires certain financial companies to disclose the impacts of climate change on their business and explain how they will manage them, reporting according to the TCFD recommendations.¹⁷⁸ On May 21, 2021, Canada launched a Sustainable Finance Action Council, which has a principal mandate that includes enhanced assessment and disclosure of climate change risks and opportunities, and an early emphasis on aligning disclosures with the TCFD recommendations.¹⁷⁹

Groups of governments have also recognized the importance of the TCFD. The United Nations Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting recently recognized that “climate-related financial disclosures are critical to understand the possible exposure of companies’ activities to the medium- and long-term effects of climate change, as well as their impacts on society, and to properly manage those impacts, risks and opportunities, including the efficient allocation of capital supporting a transition to a more sustainable, low-carbon economy.”¹⁸⁰ In April 2012, G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board “to work on evaluating the availability of data and data gaps on climate-related financial stability risks, and on ways to improve climate-related financial disclosures, and to report on these subjects...” and agreed “on the importance of promoting globally consistent, comparable high-quality standards of disclosure for sustainability reporting, building on the recommendations of the FSB’s Task Force on Climate-related Financial Disclosures.”¹⁸¹ On June 5, 2021, G7 Finance Ministers and Central Bank Governors stated, “We support moving towards mandatory climate-related financial disclosures that provide consistent and decision-useful information for market participants and that are based on the Task Force on Climate-related Financial Disclosures

¹⁷⁴ Id.

¹⁷⁵ New York State Department of Financial Services, For Public Comment: [Proposed Guidance for New York Domestic Insurers on Managing the Financial Risks from Climate Change](#) (March 25, 2021) at 3.

¹⁷⁶ The TCFD [lists](#) 78 government supporters.

¹⁷⁷ Task Force on Climate-related Financial Disclosures [Overview](#) (March 2021) at 36-39.

¹⁷⁸ New Zealand Government, [NZ becomes first in world for climate reporting](#) (April 13, 2021).

¹⁷⁹ Government of Canada, Department of Finance, News Release: [Canada launches Sustainable Finance Action Council](#) (May 12, 2021).

¹⁸⁰ United Nations Conference on Trade and Development, [Report of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting on its thirty-seventh session](#) (January 13, 2021) at 4

¹⁸¹ Italian G20 Presidency, [Second G20 Finance Ministers and Central Bank Governors meeting Communiqué](#) (7 April 2021) at 3.

(TCFD) framework, in line with domestic regulatory frameworks.”¹⁸²

Question Set 6: How should any disclosure requirements be updated, improved, augmented, or otherwise changed over time? Should the Commission itself carry out these tasks, or should it adopt or identify criteria for identifying other organization(s) to do so? If the latter, what organization(s) should be responsible for doing so, and what role should the Commission play in governance or funding? Should the Commission designate a climate or ESG disclosure standard setter? If so, what should the characteristics of such a standard setter be? Is there an existing climate disclosure standard setter that the Commission should consider?

Ceres’ position is that the SEC should propose climate change disclosure rules this year: the minimum disclosures we propose in Part I. We recommend the SEC follow that up by proposing industry-specific disclosure standards. We commend the Commission for its efforts for continuing to collaborate with IOSCO, the IFRS Foundation, and foreign securities regulators to work towards global harmonization of standards and help the SEC iterate on these core disclosure elements.

A critical feature of the SEC’s climate change disclosure work should be rigorous monitoring and engagement, through file reviews and comment letters with companies. As with past disclosure initiatives, this monitoring may reveal the need for additional guidance or rulemaking. For the SEC’s monitoring to be most effective, the Division of Corporation Finance should establish an internal task force to track compliance trends, identify weaknesses, and share insights. The task force should coordinate closely with the Office of the Chief Accountant to ensure that climate risks are taken into account in financial reporting. The task force should also monitor developments in disclosure in other jurisdictions. Indeed, monitoring and leveraging ideas from international developments is particularly critical now, as disclosures in many other jurisdictions are far more informative than U.S. disclosures at this time, even the disclosures of dual-listed companies. Over time, such developments may merit additional rulemaking.

In addition, we believe the private sector standard-setting bodies play important roles in developing new ideas to address emerging issues, and we would expect them to continue to play that role. As discussed above, we recommend that the SEC formalize their role in the SEC’s monitoring and development of disclosure policy by establishing a standing expert advisory group. We are also aware of the SEC’s role in IOSCO, co-leading the Technical Expert Group under the Sustainable Finance Task Force, and its active engagement with the IFRS Foundation related to developing a Sustainability Standards Board alongside the International Accounting Standards Board. We are excited about these developments and encourage the SEC to continue to play a significant role in IOSCO’s work. We believe the best course for the SEC and investors in U.S. securities will be to stay actively involved in the developments and consider how SEC rules could be aligned with international developments, where strategic.

The Food and Forestry sectors are examples where updates over time would be helpful. Satellite technology, land remote sensing, and other technology which can detect deforestation, quantify ecosystem carbon stocks, and allow traceability and transparency are rapidly progressing and allow for a year-on-year comparison of changes in a landscape being deforested. This has implications for disclosure requirements which would benefit from being updated over time to reflect the available technology which enables disclosure of deforestation and land use conversion.

¹⁸² G7 Finance Ministers and Central Bank Governors Communiqué (5 June 2021, London, United Kingdom).

Question Set 7: What is the best approach for requiring climate-related disclosures? For example, should any such disclosures be incorporated into existing rules such as Regulation S-K or Regulation S-X, or should a new regulation devoted entirely to climate risks, opportunities, and impacts be promulgated? Should any such disclosures be filed with or furnished to the Commission?

Climate-related disclosures should be incorporated in the financial statements and other sections of annual reports and filings in connection with initial and secondary offerings. Climate change poses financial risks that affect all industries, which every company should consider. Investors need transparency about those risks. Cordoning these disclosures off in a separate report would risk depriving investors of an understanding of the financial impacts of the risks associated with climate change and the energy transition, and how climate change risks affect other core business risks and opportunities. For this reason, incorporating climate considerations explicitly into Regulations S-K and S-X is preferable to establishing a stand-alone section devoted entirely to climate change risks, opportunities and impacts.

Because climate change issues should be integrated into existing disclosure requirements, it would not be appropriate to treat these disclosures as furnished but “not filed.” We understand that the device of treating some information as furnished but “not filed” is a form of “stop-gap measure to address, rather than a solution to, the problem of a mismatch of liability systems in the Securities Act and the Exchange Act.”¹⁸³

Question Set 8: How, if at all, should registrants disclose their internal governance and oversight of climate-related issues? For example, what are the advantages and disadvantages of requiring disclosure concerning the connection between executive or employee compensation and climate change risks and impacts?

Disclosure of companies’ approach to governance and oversight of climate-related issues is critically important, and all companies should be required to discuss it in financial filings.¹⁸⁴ As discussed in Part 1, one of the TCFD’s four main recommendations is governance disclosure, and we recommend the TCFD framework should be integrated into the SEC’s disclosure rules.

In 2018, Ceres conducted a detailed study of climate governance, board systems for climate oversight, the fluency of directors on climate issues, and executive compensation.¹⁸⁵ We analyzed the public disclosures of 475 of the world’s largest companies and found that while a third of the companies linked executive compensation to sustainability, the focus of incentives was unclear.¹⁸⁶ Only 6 percent of the

¹⁸³ David B.H. Martin and Graham Robinson, *Securities Disclosure: To Be or Not to Be “Filed”*, Insights (Sept. 2003), at 7.

¹⁸⁴ The TCFD wrote: “The Task Force recognizes that most information included in financial filings is subject to a materiality assessment. However, because climate-related risk is a non-diversifiable risk that affects nearly all industries, many investors believe it requires special attention. For example, in assessing organizations’ financial and operating results, many investors want insight into the governance and risk management context in which such results are achieved. The Task Force believes disclosures related to its Governance and Risk Management recommendations directly address this need for context and should be included in annual financial filings.” TCFD Recommendation *Report* (2017) at 17.

¹⁸⁵ Veena Ramani, Sakis Kotsantonis, Hannah Saltman & Bronagh Ward, Ceres and KKS Advisors, *Systems Rule: How Board Governance Can Drive Sustainability Performance* (2018) at 18.

¹⁸⁶ *Id.* at 5.

companies studied tied executive compensation to sustainability-linked targets and disclosed them. In the absence of such disclosure, we could not discern what type of performance was being incentivized, or the strength of the claim that the board was using sustainability-linked compensation to drive strategic results.

Compensation is one of the most potent levers the board can use to incentivize management to act on climate and other sustainability goals. By aligning executive incentives toward sustainability priorities and goals, boards are able to reward the right behavior and spur performance. We believe the Commission should emphasize the importance of clear disclosure as to whether and how companies use compensation to achieve climate goals.

Based on this rationale and our research, we recommend that the Commission require disclosure of the following elements:

- The board's role in overseeing ESG;
- The board's fluency with ESG;¹⁸⁷
- How management works with the board on overseeing ESG topics; and,
- Whether, and if so how, executive compensation is linked to sustainability.

Question Set 9: What are the advantages and disadvantages of developing a single set of global standards applicable to companies around the world, including registrants under the Commission's rules, versus multiple standard setters and standards? If there were to be a single standard setter and set of standards, which one should it be? What are the advantages and disadvantages of establishing a minimum global set of standards as a baseline that individual jurisdictions could build on versus a comprehensive set of standards? If there are multiple standard setters, how can standards be aligned to enhance comparability and reliability? What should be the interaction between any global standard and Commission requirements? If the Commission were to endorse or incorporate a global standard, what are the advantages and disadvantages of having mandatory compliance?

We strongly support the idea of comparable disclosures across jurisdictions, but we recognize that achieving that goal is challenging, based on the nearly two decades of work aimed at harmonizing two prominent financial reporting frameworks – U.S. generally accepted accounting principles and International Financial Reporting Standards. Ceres is strongly supportive of global harmonization of reporting standards and welcomes these efforts. However, it is an urgent priority for U.S. requirements to provide the critical, minimum disclosure outlined in Part 1 of our letter.¹⁸⁸

We recognize that U.S. securities laws have a different architecture and governance mechanisms from other jurisdictions, and we believe those differences are important. In particular, our accounting standard-setter operates under SEC authority and is independently funded under Section 108 of the Sarbanes-Oxley Act of 2002. That independent funding is not an inconvenience to global consensus but rather contributes significantly to driving high-quality standards in the public interest, directly in

¹⁸⁷ For information about ways to measure board fluency on ESG, see Veena Ramani, Program Director, Capital Markets Systems Program, Ceres, [Lead from the top: Building sustainability competence on corporate boards](#) (2017) at 5-8.

¹⁸⁸ Notably, other regulators are moving ahead with their own disclosure requirements. See for example, [UN PRI Regulation Database](#), which covers over 650 policy tools and guidance and more than 300 policy revision, in 84 countries, which “support, encourage or require investors to consider all long-term value drivers, including environmental, social and governance (ESG) factors.”

U.S. markets and, indirectly, through the power of ideas in other markets. For a global standard to be credible, it will have to be independent from the entities subject to it. No amount of public oversight can mitigate the actual and perceived power of the purse, which was the motivating force for Section 108 of the Sarbanes-Oxley Act.¹⁸⁹

As long as there are multiple standard setters for climate disclosure, we believe the SEC should closely monitor developments by participating in global regulator forums, such as IOSCO, and by serving (and in some cases continuing to serve) in an observer capacity in rule setting (e.g., as the SEC staff monitor and observe IASB projects and meetings). In this way, the SEC can leverage useful standards developed by others. In this regard, as discussed above, we recommend that the SEC adapt disclosures that have been developed by other standard-setters and determined to result in suitable content and methodology (e.g., the TCFD framework, the GHG Protocol).

Question Set 10: How should disclosures under any such standards be enforced or assessed? For example, what are the advantages and disadvantages of making disclosures subject to audit or another form of assurance? If there is an audit or assurance process or requirement, what organization(s) should perform such tasks? What relationship should the Commission or other existing bodies have to such tasks? What assurance framework should the Commission consider requiring or permitting?

We believe the SEC should use all the enforcement tools at its disposal to improve climate change disclosure. We welcomed then Acting Chair Lee's statement in February that she had "direct[ed] the Division of Corporation Finance to [enhance its focus on climate-related disclosure](#) in public company filings." We also welcomed the announcement in March of a new [Climate and ESG Task Force](#) in the Division of Enforcement. These steps are critical to enforcing material climate-related disclosure both under existing financial reporting and accounting requirements as well as under any new climate disclosure requirements.

It will also be helpful for the SEC to use its filing reviews and enforcement activities to identify compliance gaps that would benefit from industry- or market-wide guidance. For example, from time to time the Division of Corporation Finance and the Office of the Chief Accountant have each issued letters and Staff Legal Bulletins to bring attention to widespread compliance gaps. For example, the coordinated statements from Acting Director Coates and Acting Chief Accountant Munter on special purpose acquisition companies identified and quickly addressed important compliance problems in connection with those vehicles.

Assurance is important to improving climate change disclosure, because it is neither practical nor efficient for staff to review all filings, and staff cannot access internal corporate data to validate disclosures. Therefore, we recommend the SEC consider requiring high-quality assurance for any climate change disclosure standards it adopts or requires by reference to another standard-setting body. At a minimum, disclosure of companies' GHG emissions, characterization of capital expenditures, and scenario analyses should be assured at the reasonable assurance level according to standards developed by the Public Company Accounting Oversight Board. This assurance should either be part of the required audits of companies' financial statements and internal control over

¹⁸⁹ See Greg Hitt and Michael Schroeder, Wall Street Journal, [Enron Hoped to Extend Influence to International Accounting Group](#) (Feb. 14, 2002).

financial reporting (ICFR) or conducted in a way that relates to and is taken into consideration in those audits.

Linking assurance over climate disclosures to the financial statement and ICFR audits is important because climate information can have a material impact on companies' financial results and position. For example, GHG emissions associated with a company's operations, supply chain and/or products may affect cost of materials and operations estimated in future cash flows as the price of carbon rises and/or affect the volume and price of sales as consumer markets shift toward lower-carbon alternatives. Financial statement auditors should be aware of these risks in testing and evaluating a company's estimation processes.

Mandating high-quality assurance will be an extremely important mechanism to maintain robust and reliable climate disclosure.¹⁹⁰ Today, many companies voluntarily obtain third-party assurance of their GHG emissions, but the scope of procedures, level of assurance, quality, and auditor expertise and independence vary considerably. One of the problems is that in many cases, although certainly not all, the level of assurance obtained is limited. This assurance does not result in an opinion that the disclosure is fairly presented in accordance with the applicable reporting framework (e.g., the GHG Protocol). In such cases, investors are left to question whether the underlying disclosure is actually reliable.¹⁹¹

If ESG information is value-relevant and assured, investors perceive it to be more important and are more willing to invest in the company.¹⁹² Moreover, academic research suggests that users of corporate sustainability reports anticipate more credible reporting and are more willing to price sustainability information into the stock price when it is assured.¹⁹³

Question Set 11: Should the Commission consider other measures to ensure the reliability of climate-related disclosures? Should the Commission, for example, consider whether management's annual report on internal control over financial reporting and related requirements should be updated to ensure sufficient analysis of controls around climate reporting? Should the Commission consider requiring a certification by the CEO, CFO, or other corporate officer relating to climate disclosures?

¹⁹⁰ See, e.g., Ryan Casey and Jonathan Grenier, *Understanding and Contributing to the Enigma of Corporate Social Responsibility (CSR) Assurance in the United States*, Auditing: A Journal of Practice and Theory (Nov. 2012) ("CSR assurance is associated with lower cost of capital, lower analyst forecast errors and dispersion, and higher earning quality."); Peter Clarkson, Yue Li, Gordon Richardson and Albert Tsang, *Causes and Consequences of Voluntary Assurance of CSR Reports: International evidence involving Dow Jones Sustainability Index Inclusion and Firm Valuation*, Accounting Auditing and Accountability Journal (Nov. 2019) (finding that "having CSR disclosure assured increases the likelihood of being included in the DJSI and attracts more SRI").

¹⁹¹ See Michael Kraten, *Sustainability Reports and the Limitations of 'Limited' Assurance*, CPA Journal (July 2019) ("[I]nconsistencies and variations" in limited assurance statements and practices "greatly reduce the value of the assurance reports, and thus of the sustainability data that are included in them.").

¹⁹² Helen Brown-Liburd and Valentina Zamora, *The role of corporate social responsibility (CSR) assurance in investors' judgments when managerial pay is explicitly tied to CSR performance*, Auditing: A Journal of Practice & Theory (2015). This study investigates investors' stock price assessment when manager's performance is tied to CSR investment. They find that, in the case of high CSR investments, investors increase their stock market valuation only when CSR information is assured.

¹⁹³ See Karen De Meyst, Eddy Cardinaels and Alexandra Van den Abbeele, *CSR disclosures in Buyer-Seller Markets: The Impact of Assurance of CSR Disclosures and Incentives for CSR Investments* (June 1, 2018).

As discussed above in response to Question Set 10, climate change disclosures should be clearly linked to companies' financial statements and included in annual reports filed with the SEC. Disclosures should either come within the existing audits of the financial statements and ICFR or be subject to assurance that itself links to those audits. If the Commission followed this approach of locating the new climate disclosure (e.g., GHG emissions disclosure) within or supplemental to the financial statements, there would not be a need for a separate management report or preparation of the new disclosures. This is an important efficiency that will save the unnecessary costs of entirely separate management reports and audit reports. It is important that the new disclosures be subject to the Commission's requirements that companies maintain effective internal control over preparing the new climate disclosures and that they come within an expanded audit. If this approach is followed, then the existing CEO and CFO certifications will cover the new disclosures and should suffice in their current form.

Climate disclosure is financial. GHG inventories should be tracked, reported and audited just as raw materials and inventory stocks are. Capital expenditures to retool for transition or to adapt to climate change risks are as financial as any other outlays. And the TCFD's climate scenario analyses model financial outcomes similar to any other financial sensitivity analyses. This is not the first time that uncertainties about the future have had to be factored into companies' future cash flows. Treating climate change risks as separate from financial risk – i.e., failing to acknowledge the impact of climate change and energy transition on companies' business models and financial results and positions, as many companies do today – could risk a financial crisis that transparency today can help mitigate or avoid.

Question Set 12: What are the advantages and disadvantages of a “comply or explain” framework for climate change that would permit registrants to either comply with, or if they do not comply, explain why they have not complied with the disclosure rules? How should this work? Should “comply or explain” apply to all climate change disclosures or just select ones, and why?

For the disclosures specifically discussed in recommendations 1 through 10, we do not recommend a “comply or explain” approach, and instead recommend mandatory, standardized disclosure for all covered companies. The systemic financial risk posed by climate change, the urgency to transition to a net zero economy, and the severity of the existing risks already being borne by investors, issuers and the economy at large necessitate that issuers produce these disclosures.

Important standard setters agree. In response to the UK Financial Conduct Authority's (FCA) proposals to enhance climate-related disclosure, including a “comply and explain” approach, the Climate Disclosure Standards Board (CDSB) stated that “[g]iven the significant risks arising from climate change to the UK and global economy, this approach will not yield sufficient transparency fast

enough to allow financial markets to manage and price these risks appropriately.”¹⁹⁴ ¹⁹⁵ CDSB Managing Director Mardi McBrien further clarified their position:

“Having developed the CDSB Framework over ten years ago, whose principles and requirements form the basis for the TCFD’s recommendations, the time has come to mandate quality climate-related reporting. This means a level of reporting that reliably informs decisions, stands up to scrutiny, directly influences the movement of financial capital and supports the transition and transformation necessary to a low-carbon economy. While we strongly commend the FCA’s impetus, **the lack of progress in tackling climate change demands that we fast track the implementation path originally set by the TCFD in 2017. There’s no more time to be on the journey. We need to be at the destination, neatly packing our climate-related financial disclosure in mainstream reports.**”¹⁹⁶
(emphasis added)

Furthermore, a “comply and explain” approach would have important implications for the Commission’s cost/benefit analysis. The urgently needed disclosures we recommend above will yield significant investor benefits by providing consistent disclosure. In contrast, a “comply and explain” approach would create fragmented disclosure, increasing the enforcement burden for the Commission by creating critical disclosure gaps. Similarly, these disclosure gaps would create a burden for investors and undermine the purpose of a climate disclosure regime of producing consistent, comparable information.

Mandatory, standardized disclosure is also an important market efficiency, because it facilitates data aggregation and comparison. Indeed, investors have long used third-party data aggregators as an important tool to make broad financial analysis for investment decisions and proxy voting possible and efficient. When it comes to financial statements, the aggregators can pull from audited, comparable financial statements, making it a rare case when an investor needs to go to the underlying source report issued by the company. This is an important efficiency that is not in place for sustainability disclosure in financial filings, because the currently disclosed data is not consistently reported or comparable.

We recognize that the “comply and explain” approach may provide regulators some flexibility to slowly build a more expansive ESG framework from a minimum floor of across-the-board climate disclosure.¹⁹⁷ However, the severity and urgency of climate risk requires prompt economic

¹⁹⁴ Climate Disclosure Standards Board, [CDSB warns a comply or explain approach is not sufficient in reaction to UK FCA’s Proposals to enhance climate-related disclosure by listed issuers and clarification of existing disclosure obligations](#) (March 10, 2020).

¹⁹⁵ See also Response from the Investment Association, [FCA Consultation CP20/3: Proposals to Enhance Climate-Related Disclosures by Listed Issuers and Clarification of Existing Disclosure Obligations](#) (2021) at 2 and 6. The association represents 250 investments management organizations managing £8.5 trillion for savers and institutions: “There is significant support amongst our members for the FCA to go further than the proposals set out in this consultation by making TCFD-aligned disclosures mandatory for all premium-listed commercial companies. While a number of members are supportive of the current proposal for a ‘comply or explain’ approach, at least initially, they are clear that this should move to a mandatory basis over a short period. The IA therefore recommends that the FCA introduces the TCFD disclosure requirement for all commercial companies with a premium listing on a mandatory basis.”

¹⁹⁶ Ibid.

¹⁹⁷ Virginia Harper Ho, [“Comply Or Explain” And The Future Of Nonfinancial Reporting](#) (May 13, 2017) Lewis & Clark Law Review, Vol. 21:2, at 318.

transformation to avoid systemic and “sub-systemic” shocks. Investors do not have the luxury of a gradual shift towards TCFD-recommended disclosures. Indeed, one of the key weaknesses of “comply or explain” is the tendency towards inadequate explanations and a “checking of the box” by firms choosing not to disclose.

For firms that are systemically important, such as larger banks, or institutions that are large emitters or that insure physical risk, for example, the “comply or explain” approach could be inappropriate. A disclosure gap for such institutions could mislead investors or prevent decisive action needed to enable a smooth energy transition. Should the Commission consider applying such an approach to recommendations 1 through 10, as noted above, we urge careful study to weigh potential costs of the documented weaknesses of the “comply or explain” approach.¹⁹⁸

Question Set 13: How should the Commission craft rules that elicit meaningful discussion of the registrant’s views on its climate-related risks and opportunities? What are the advantages and disadvantages of requiring disclosed metrics to be accompanied with a sustainability disclosure and analysis section similar to the current Management’s Discussion and Analysis of Financial Condition and Results of Operations?

Incorporating the TCFD recommendations into Reg. S-K will provide ample opportunity for registrants to provide their perspectives on climate-related risks and opportunities. Climate change disclosures should be clearly labeled, but we do not believe that a separate sustainability disclosure and analysis (SD&A) section is necessary. A separate SD&A section is likely to send an unhelpful message to registrants: that sustainability issues should be considered separately from other financial issues.¹⁹⁹

Climate risk, including risks associated with Scopes 1-3 GHG emissions, should be factored into the company’s financial reporting. Allowing or encouraging companies to provide disclosure about climate risks and opportunities separate from financial disclosure risks investors, banks and companies themselves underestimate the financial impact of climate risks to companies’ business models and asset valuations.

Question Set 14: What climate-related information is available with respect to private companies, and how should the Commission’s rules address private companies’ climate disclosures, such as through exempt offerings, or its oversight of certain investment advisers and funds?

There is a significant lack of transparency by private companies and Ceres strongly supports efforts by the Commission to address this critical information gap.²⁰⁰ Private companies enjoy a regulatory advantage over public issuers as it relates to disclosing information material to investors, especially the type of information that may give pause to an existing or prospective investor weighing an investment decision, for example, in relation to a strategy to address climate risk. This regulatory advantage could also conceal a company’s actions from public scrutiny, as well as scrutiny from

¹⁹⁸ See for example, Reints Abma & Mieke Olaerts, *Is the Comply or Explain Principle a Suitable Mechanism for Corporate Governance Throughout the EU?: The Dutch Experience*, 9 Eur. Company L. 286, 288–89 (2012). (summarizing potential drawbacks of the comply-or-explain rule).

¹⁹⁹ Veena Ramani and Jim Coburn, Environmental Law Reporter, [The Need for SEC Rules on ESG Risk Disclosure](#) (August 2020) at 10651.

²⁰⁰ Ceres supports the recommendations submitted in response to the Request for Information by Healthy Markets.

creditors (including suppliers), investors, and consumers. Private companies — especially those pursuing commercial endeavors that have negative impact on climate change — can also selectively disclose self-serving information while omitting the type of information that could allow shareholders or stakeholders to hold the company accountable. The status quo places the burden of researching and verifying strategies to address climate risk on the investors the Commission is mandated to protect.

Indeed, Commissioners Allison Herren Lee and Caroline Crenshaw found that:

“Private offerings lack the traditional investor protections that attach to registration, most importantly transparency and liquidity. Thus, the principal means of protecting investors in private markets is to work to ensure that those offering unregistered securities can only sell to investors who can assess and bear the heightened risks in private markets.”²⁰¹

Given the growing importance and influence of private equity (assets under management (AUM) in the sector nearly tripled in 2010-2020, and are expected to double in 2021-2025²⁰²), investors have raised expectations of climate risk management performance and disclosure.²⁰³ Notable private equity firms have begun to take climate and ESG action, collectively²⁰⁴ and individually²⁰⁵ and would therefore benefit from increased market understanding of their approaches to these issues.

To help address this information gap, Ceres and ERM have released a new report, *The Changing Climate for Private Equity*.²⁰⁶ It discusses the increasing pressure the industry is facing to align investment activity with carbon reduction targets and other climate-related goals, as well as the need for better guidance and tools to support the development and implementation of climate-aligned investment strategies.²⁰⁷ The report identifies information gaps in private company disclosure of climate change risks and provides 13 disclosure-related recommendations for these companies to consider.²⁰⁸

As with public companies, the lack of “decision-useful”, consistent and comparable climate risk disclosure data from private firms creates significant risks for investors. If the SEC expands its disclosure requirements for public companies, there will be pressure to go or stay “private.” This pressure will likely be greatest in industries with increased exposure to climate-related risks, such as fossil fuels, real estate,

²⁰¹ SEC Commissioners Allison Herren Lee and Caroline Crenshaw, [Joint Statement on the Failure to Modernize the Accredited Investor Definition](#) (August 26, 2020).

²⁰² Dazzle Bhujwala, Aiste Brackley, Mark Lee, Elaine Lonie, Justin Nelson & Steven Rothstein, Ceres and The SustainAbility Institute by ERM, [The Changing Climate for Private Equity](#) (June 2021).

²⁰³ UN PRI and IIGCC, [A Guide On Climate Change For Private Equity Investors](#) (2016).

²⁰⁴ UN PRI, [Nearly 90 private equity firms representing \\$700 billion AUM have signed up to a global climate initiative ahead of COP26](#) (March 26, 2021).

²⁰⁵ See, for example, Wall Street Journal, [Blackstone Sets Goal to Reduce Carbon Emissions](#) (September 29, 2020) and [Climate Change Shapes Private-Equity Deal Making](#) (December 6, 2020).

²⁰⁶ Ceres and The SustainAbility Institute by ERM, [The Changing Climate for Private Equity](#) (June 2021)

²⁰⁷ Id. at 6-7.

²⁰⁸ Id. at 44-46.

and financial services. We are specifically concerned with gaps in disclosure by large private companies²⁰⁹ and large private funds²¹⁰.

The Commission must address this gap, including by ensuring private firms disclose in line with TCFD. Indeed, this approach is supported by BlackRock CEO Larry Fink who recently stated, “I believe TCFD should not just be adopted by public companies. If we want these disclosures to be truly effective – if we want to see true societal change – they should be embraced by large private companies as well.”²¹¹

As it considers the potential benefits of private company disclosure, we urge the Commission to consider the impacts on banks, funds and regulators. Banks and asset managers are expected to assess their climate-related risks.²¹² However, for those assessments to be accurate, those institutions must first have detailed information that is generally only in the possession of the issuers of those securities. Further, to the extent that banking regulators and other governmental entities are focused on potential systemic risks related to climate change, they must also rely on information that is mostly -- if not entirely -- within the possession of the issuers of the securities held by banks and asset managers. Notably, the SEC’s disclosure rules determine what, if anything, these financial institutions receive. As a result, the application of the SEC’s disclosure obligations to private securities, and particularly to fixed income securities, will be an essential precondition to effective financial markets and regulators’ assessments of climate risks.

Today, there is more corporate debt outstanding than ever before, and the vast majority of that debt was offered pursuant to exemptions from SEC-mandated disclosure requirements. As a result, investors in these securities may not receive any detailed information related to various climate or other ESG-related risks. Further, to the extent investors may receive information, it may not be reliable, audited, or comparable to information received from other issuers. Further, the risks for investors in these securities may be very different than for the shareholders of the underlying issuers. Notably, as the fossil fuel industry has come under pressure in recent years, the financing for fossil fuels has generally shifted from more public equity financing to more private financing and more debt securities. But assessing the risks of those securities without mandatory, standardized, reliable, useful information will be difficult, if not impossible. For example, if a large fossil fuel company were to sell debt securities that don’t come due for a dozen years or more, what are the climate-related risks associated with those securities?²¹³ How

²⁰⁹ The SEC’s disclosure regime generally does not apply to large, private companies, including those owned by private equity or venture capital investors. As a result of the expansion of private offering exemptions, the number and size of private companies has increased dramatically over the past several years. These include large private equity owned retailers, real estate owners, and so-called “unicorns” (i.e., “startup” companies with valuations over \$1 billion). As of May 2021, it is estimated that there are more than 660 “unicorns” around the world, with the United States being home to the greatest number. CB Insights, [The Complete List of Unicorn Companies](#) (accessed May 2021).

²¹⁰ Large private funds, such as venture capital and private equity funds, are typically offered pursuant to the same types of exemptions to the federal securities laws. Again, these exemptions may allow the private funds to also avoid the disclosure obligations that would accompany registered offerings of securities or registered funds (e.g., mutual funds).

²¹¹ BlackRock, [Larry Fink’s 2021 Letter to CEOs](#) (2021)

²¹² See, e.g., IIGCC, press release, [Leading investors representing \\$11 trillion call on banks to set enhanced net zero targets](#) (April 20, 2021); Ceres, press release, [43 New Asset Managers Commit to Net Zero Emissions Goal](#) (March 29, 2021).

²¹³ See, e.g., [Exxon Mobil Corporation, 2020 10K](#), at 90 (reflecting billions of debt outstanding at interest rates below 7% that would not be due until 2038 and later); see also Khalid Al Ansary and Kevin Crowley, [Exxon Puts Iraq](#)

would a bank or investment vehicle assess those risks, if they are not provided with basic information from the issuer first?

In particular, the Commission should revise its rules to incentivize large companies and large offerings of securities to join the SEC's public markets reporting regime.²¹⁴ Further, the Commission should consider conditioning any remaining exemptions upon the disclosure of details of the securities, including financial information, and climate and ESG-related information. To support this critical work, we also recommend that the Commission create a committee or subcommittee to enlist advisory support for regulatory issues related to private market registration and disclosure.

Question Set 15: In addition to climate-related disclosure, the staff is evaluating a range of disclosure issues under the heading of environmental, social, and governance, or ESG, matters. Should climate-related requirements be one component of a broader ESG disclosure framework? How should the Commission craft climate-related disclosure requirements that would complement a broader ESG disclosure standard? How do climate-related disclosure issues relate to the broader spectrum of ESG disclosure issues?

Ceres welcomes the Commission's work to evaluate a range of ESG issues for disclosure consideration. We strongly support the development of a mandatory ESG disclosure framework, as argued in our 2018 Petition for Rulemaking.²¹⁵ We also strongly support the creation of a proposed Climate and ESG Advisory Committee to support the SEC's work in this critical area.

However, as it works to develop such a framework, the Commission should explicitly prioritize consideration of the recommended issuer disclosures we discuss below. This would meet investor demands for ESG information that allows more robust analysis of how issuers are addressing climate transition risks and opportunities emerging from public policy engagement as well as human capital and water risk management. The urgent risks posed by climate change, as well clear investor demands, necessitate rapid work in these areas.

Our recommended disclosures draw from Ceres Roadmap 2030²¹⁶, and many years of work on ESG issues in a range of sectors, including extensive research on evolving investor ESG information needs and corporate best practice in addressing these needs and integrating ESG into risk management practices. The recommended disclosures below would be consistent with recommendations of the TCFD, the [Climate Action 100+](#) and the [Ceres Roadmap 2030](#).

[Field Up for Sale With Debt Mountain Looming](#), Bloomberg (April 15, 2021) (explaining how the company may be selling assets to pay off its large corporate debts).

²¹⁴ Tyler Gellasch and Lee Reiners, [From Laggard to Leader: Updating the Securities Regulatory Framework to Better Meet the Needs of Investors and Society](#), Global Financial Markets Center at Duke University School of Law (February 2021) at 10.

²¹⁵ Ceres, et. al., [Request for SEC Rulemaking on ESG Disclosure](#) (Oct 1, 2018).

²¹⁶ The [Ceres Roadmap 2030](#) is a resource for companies and investors, providing a practical 10-year action plan to help companies strategically navigate the new and ever-changing business reality and thrive in the accelerated transition to a more equitable, just and sustainable economy.

Human Capital Management (HCM)

Climate transition risks and opportunities include those that apply to human capital. PwC estimates that “up to 85% of a company’s costs are tied up in people.”²¹⁷ Consistent with TCFD recommendations, Ceres finds that disclosure is needed to allow investors to evaluate whether issuers have adopted corporate best practice in addressing and assessing the climate transition risks related to human capital. These best practices include:

- **Conducting scenario analysis** to proactively identify and assess economic, environmental and labor trends that may affect the current and future direct and indirect workforce, including, but not limited to: automation, digitization, consumer preferences and demand, the effects of climate change on specific industries and/or sourcing regions, and the transition to a low carbon economy
- **Assessing the potential for human capital-related stranded assets and forecasting future skill needs and employment opportunities** across the company’s workforce, funding, designing and providing equitable access to training programs.
- **Engaging in social dialogue** with employees, worker representatives, and local and national governments, and constructively consulting with suppliers, communities and peer companies (pre-competitively) to identify solutions that proactively avoid business model disruption and enable a just transition that is inclusive of worker voice and experience.
- **Disclosing granular information to investors and the public** on key metrics of interest to investors to assess the strength of corporate strategy on workforce investments. This includes disclosure related to existing and planned workforce demographics, stability composition, skills and capabilities, culture and empowerment, health and safety, productivity, compensation and incentives and human rights commitments and their implementation.²¹⁸

With the coming into force of the new human capital disclosure requirements in Regulation S-K in November 2020, the SEC has made some progress on increasing disclosures on key metrics of interest to investors to assess the strength of corporate strategy on workforce investments.^{219 220} However, these rules and disclosures to date still fall short of investor demands and must be strengthened and expanded, to complement climate risk disclosure.²²¹

We welcome the Chair’s recent announcements of upcoming rulemaking related to HCM²²², as this provides an important opportunity to improve the existing framework to complement climate disclosures.

²¹⁷ PwC, [New human capital disclosure rules: Getting your company ready](#) (October 8, 2020)

²¹⁸ This is in line with the recommendations of the Human Capital Management Coalition in SEC comments [submitted](#) in 2017.

²¹⁹ SEC, Final Rule: [Modernization of Regulation S-K Items 101, 103, and 105](#) (2020).

²²⁰ Ceres supports the following comments submitted in the Modernization of Regulation S-K rulemaking, including [AFL-CIO](#) and [Human Capital Management Coalition](#).

²²¹ The Human Capital Management coalition found that “under the new rules shareholders would still face difficulty in obtaining information that is clear, consistent, and comparable in order to make optimal investment and voting decisions. While the rulemaking represents important progress in acknowledging the importance of the workforce, the new rules give public companies too much latitude to determine the content and specificity of the human capital-related information they report.” Human Capital Management Coalition, [Statement Re: SEC’s Regulation S-K Final Rulemaking](#) (August 27, 2020).

²²² Chair Gary Gensler, [Testimony Before the Subcommittee on Financial Services and General Government, U.S. House Appropriations Committee](#) (May 26, 2021).

Public policy engagement

There is consensus amongst investors with \$50 trillion in assets under management, that climate-related public policy engagement by issuers requires additional disclosure, in order to better assess management's climate decision-making and strategy.²²³ This consensus has also been demonstrated through a range of investor initiatives seeking to improve disclosure to determine if issuer lobbying is "Paris-Agreement-aligned", including public documentation of investor expectations on lobbying transparency²²⁴, letters to the SEC calling for lobbying transparency²²⁵, and letters to US issuers and other companies.

In September 2019, 200 institutional investors with a combined \$6.5 trillion in assets under management sent letters to 47 of the largest U.S. publicly traded corporations to align their climate lobbying with the goals of the Paris Agreement, warning that lobbying activities that are inconsistent with meeting climate goals are an investment risk.²²⁶ In their letter to companies, the investors specified how corporate lobbying activities that are inconsistent with meeting the goals of the Paris Agreement present financial risks to investors:

- "Regulatory risks: Delay in action now will likely result in the need for stronger and more drastic regulatory interventions later, leading to much higher costs for companies.
- Systemic economic risks: Delay in the implementation of the Paris Agreement increases the physical risks of climate change which elevates uncertainty and volatility in our portfolios and poses a systemic risk to global economic stability.
- Reputational and legal risks: Companies may face backlash from their consumers, investors or other stakeholders if they, or the organizations they support, are seen to be delaying or blocking effective climate policy." (emphasis added).²²⁷

In 2020, investors sent an updated letter to the same companies continuing the call for disclosure on direct lobbying and indirect lobbying through trade associations.²²⁸

Recent shareholder votes also document the priority investors are placing on securing the disclosures that allow them to assess these risks.²²⁹ According to Roll Call, "[a] shareholder proposal seeking reporting on climate lobbying and its alignment with Paris accord goals won majority support at Chevron Corp.'s shareholder meeting in 2020, the first year the measure went to a vote at any U.S. company. Although the request was nonbinding, the second-largest U.S. oil company produced the report. [...] The world's largest asset manager, BlackRock, backed the measure at Chevron, a powerful signal given its status among most public companies' top shareholders. BlackRock, which manages \$8.7 trillion in assets, said ahead of 2021 corporate meetings that it will begin asking companies to confirm that their political

²²³ [Climate Action 100+](#).

²²⁴ IIGCC, [European Investor Expectations On Corporate Lobbying On Climate Change](#) (October 2018).

²²⁵ AFL-CIO, [SEC Comment on Modernization of Regulation S-K](#), 19-21.

²²⁶ Ceres, [200 Investors Call on US Companies to Align Climate Lobbying with Paris Agreement](#) (September 16, 2019)

²²⁷ Ibid. See also [letter](#) sent to each company.

²²⁸ Ceres, [Major US investors call on largest corporate emitters to disclose how their climate lobbying aligns with climate science](#) (October 26, 2020); See also [letter](#) sent to companies.

²²⁹ Interfaith Center on Corporate Responsibility (ICCR), [Investors See Momentum Building as Companies Agree to Support Paris-Aligned Climate Policy](#) (April 8, 2021). ICCR comprises more than 300 member organizations with combined assets of over \$US 2 trillion.

activities are in line with public statements on policy issues and explain any inconsistencies with trade association positions.”²³⁰

As it considers policy engagement disclosures, we recommend the Commission consider the Climate Action 100+ framework. The Climate Action 100+ has disclosure expectations on “climate policy engagement”, which is “Disclosure Indicator 7” in its Benchmark of corporate performance. Specifically, the benchmark uses the following metrics:

Sub-indicator 7.1 The company has a Paris-Agreement-aligned climate lobbying position and all of its direct lobbying activities are aligned with this.

Metric a): The company has a specific commitment/position statement to conduct all of its lobbying in line with the goals of the Paris Agreement.

Metric b): The company lists its climate-related lobbying activities, e.g. meetings, policy submissions, etc.

Sub-indicator 7.2 The company has Paris-Agreement-aligned lobbying expectations for its trade associations, and it discloses its trade association memberships.

Metric a): The company has a specific commitment to ensure that the trade associations the company is a member of lobby in line with the goals of the Paris Agreement.

Metric b): The company discloses its trade associations memberships.

Sub-indicator 7.3 The company has a process to ensure its trade associations lobby in accordance with the Paris Agreement.

Metric a): The company conducts and publishes a review of its trade associations’ climate positions/alignment with the Paris Agreement.

Metric b): The company explains what actions it took as a result of this review.²³¹

Ceres has conducted extensive research on best practice in Paris-aligned policy engagement for corporations, including the [Blueprint For Responsible Policy Engagement On Climate Change](#)²³². Disclosure of climate lobbying forms a crucial component of a climate risk management strategy. Once a company understands the nature of its climate risk exposure, including the risk it faces from climate change as a systemic risk, it should assess the extent to which its direct and indirect lobbying serves to address or exacerbate these risks. The company should then conduct an internal audit on science-based climate policy alignment to surface when companies may be “spending against themselves” and “spending against climate mitigation.” Internal audits for science-based climate policy help companies identify their risks from lobbying that may be misaligned with climate science. The results of these audits, including misalignment with trade associations, and the management response, should be disclosed.

²³⁰ Roll Call, [Corporations agree to transparency on climate lobbying](#) (April 15, 2021). See also: Ceres, [At annual meeting, Chevron investors achieve historic majority vote on Paris-aligned climate lobbying](#) (May 27, 2020)

²³¹ Climate Action 100+, [Benchmark](#) at p. 3

²³² Ceres, [Blueprint For Responsible Policy Engagement On Climate Change](#) (July 2015)

Water risk

The SEC should ensure that all companies disclose material risks related to access to and pollution of water.²³³ Competition for water, weak regulation of water withdrawals and discharges, growing population, ageing infrastructure, water scarcity and water contamination are all sources of material financial risks for many companies. Climate change exacerbates these risks. These can be acute, event-driven risks, including increased severity of extreme weather events, such as droughts, floods, cyclones, or hurricanes, or chronic risks resulting from longer-term shifts in climate patterns, such as sustained higher temperatures, sea-level rise or chronic heat waves. In addition to physical risks, regulatory and social risks, such as fines or enforcement actions, or risks to a company's social license to operate, are increasingly manifesting as financially material and impacting a wide range of asset

²³³ The TCFD also recommends specific risk disclosure on water. See TCFD, Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures at 6 ("Organizations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; and extreme temperature changes affecting organizations' premises, operations, supply chain, transport needs, and employee safety.").

classes.²³⁴ They may also have material impacts on operations, supply chains, transport needs, and employee safety, which can lead to increased costs and reduced revenues.²³⁵

There is growing evidence of the financial materiality of water risks for both companies and investors. Water is a topic material to many industries according to the Sustainability Accounting Standards Board (SASB). Water-related risks such as flood, drought, sea level rise, increasing frequency and severity of weather events are linked to the physical climate risk dimension outlined by the Task Force on Climate Related Financial Disclosures. Other standards and frameworks including the Global Reporting Initiative (GRI), the Climate Disclosure Standards Board (CDSB), CDP and the Global Impact Investing Initiative's IRIS+ metrics include a broader set of water-related indicators related to physical, social and regulatory risk. The SEC should also provide comprehensive disclosure guidance related to surface water and aquifer depletion, water pollution and the resulting company reputational water risks, regulatory risks, and social license to operate risks.

²³⁴ 2020: Rising water stress risk threatens US coal plants, largely clustered in 5 states: Based on an analysis of data from S&P Global Market Intelligence and the World Resources Institute, power generators in Texas, Indiana, Illinois, Wyoming and Michigan operate about 37.1 GW of coal-fired generation capacity in areas projected to face medium-high to extremely high water stress — when humanity's competition for water exceeds nature's ability to replenish it — due to climate change in 2030. Those five states are home to more than one-third of the 98.2 GW of coal capacity analyzed that falls into those upper-risk categories.

2020: Constellation Brands: Water rights, a \$1.4B brewery, and the social license to operate: On Monday, March 23, 2020, Constellation Brands (STZ) stock fell -12% (vs. the S&P -2.9%) after Mexican citizens voted against the company's \$1.4B brewery project in Mexicali, Baja California. The brewery project began in 2016 and is already 70% complete, with STZ having invested ~\$900M to date. Concern from local activists, citizens, and environmental groups over water supply in the region led to the President calling for a local referendum in early March. However, local farmers, other citizens had been protesting the construction of the brewery since 2016 on the grounds that it would strain water supply

2021: Initial Texas agricultural loss estimates from Winter Storm Uri exceed \$600 million: AgriLife Extension estimates of some of the state's biggest agricultural losses by commodity were:

- Citrus crops: At least \$230 million.
- Livestock: At least \$228 million.
- Vegetable crops: At least \$150 million.

2021: DuPont, Chemours in \$4 Billion 'Forever Chemicals' Cost Pact: DuPont de Nemours Inc. and Chemours Co. agreed to a \$4 billion settlement of a dispute over environmental liabilities shifted to Chemours after it was spun off in 2015. The agreement covers payments for liabilities tied to a class of chemicals known as PFAS. PFAS are widespread in the environment and human blood after decades of use to make things slippery, nonstick or waterproof. Their bonds are so stable that they're known as "forever chemicals." Used to make items like carpets, fabrics and firefighting foams, they've been found at high levels in some areas, particularly around airports and Air Force bases, prompting concerns about drinking water and creating costs for municipal water systems and states.

²³⁵ Further demonstrating that water risks are material, financial risks, the Networking for the Greening of the Financial System, a growing group of central banks including the Fed, called for a need to focus both on climate risks and environmental degradation in their Guide for Supervisors: integrating climate-related and environmental risks into prudential supervision released in 2020. Specifically, water transition risks, including those from "government action aimed at regulating the supply of available water through extraction restrictions or pricing" are now included within the environmental degradation category. These types of regulatory measures may include water allocation, equipment upgrades, factory shutdowns, tighter wastewater discharge permits, tiered water pricing to optimizing industrial sectors to the water availability of the basin.

Deforestation risk

As a key driver of climate change, deforestation exacerbates systemic climate risk.²³⁶ It is in the clear financial interest of investors—consistent with their fiduciary duty—to engage with companies on their deforestation exposure. Companies and investors should account for deforestation and its associated GHG emissions in order to have a complete view of how climate change will affect businesses and portfolios. Companies sourcing agricultural and forest commodities have exposure to transition risks due to their deforestation-related GHG emissions, as well as high levels of physical risk that are exacerbated by deforestation.

Deforestation-driven climate risk is a function of a company's exposure to deforestation based on its commodity sourcing patterns and the way in which the company responds to manage exposure and mitigate risk. To address the systemic risk of climate change, all companies should have a broader climate strategy with ambitious greenhouse gas reduction targets for all of its emissions. For companies with direct exposure to deforestation, a robust no-deforestation commitment must be a part of the overall strategy a company employs to achieve its climate commitments. Best practice to address systemic risk includes effective corporate response to climate change and deforestation should have three components: ambitious, time-bound GHG reduction targets that include deforestation emissions; a no-deforestation policy with strong supply chain implementation; and transparent disclosure of progress – or lack of progress – on both no-deforestation and climate targets. A company's policies and implementation plan for eliminating deforestation from its supply chains must be a part of its overall climate strategy (Figure 9).

Companies that source forest-risk commodities cannot meet full scope, science-based emissions reductions targets, as recommended in the previous section, without implementing comprehensive no-deforestation policies. Deforestation-related emissions contribute substantially to GHG emissions of companies that produce or source forest-risk commodities. Best practice for these policies includes:

- Policies should apply to all commodities and all regions where the company sources commodities.
- Policies should cover indirect suppliers as well as direct suppliers.
- Policies should be paired with time-bound commitments to eliminate deforestation.

A no-deforestation policy is only effective if the company ensures implementation of the policy throughout its supply chains. Companies should implement no-deforestation commitments by developing mechanisms for monitoring and verifying supplier compliance with corporate policies, addressing non-compliance, and incentivizing agricultural practices that protect forests.²³⁷ Best practice includes that companies should be able to trace their raw materials throughout their supply chains to a level that assures compliance with no-deforestation policies; should monitor and verify supplier compliance with their no-deforestation policy; should develop a protocol for suppliers that are not complying with the deforestation policy, and should provide incentives to producers to protect forests.

The Commission should seek to support best practice in addressing deforestation risk by requiring:

- Regular disclosure of quantifiable progress to eliminate deforestation from their supply chains.

²³⁶ Ceres, [The Investor Guide to Deforestation and Climate Change](#) (June 2020)

²³⁷ Ibid at 25.

- Disclosure of quantifiable progress on GHG emissions reductions from land use change.

Diversity and Inclusion risks

As the SEC considers rulemaking on HCM, we Investors support and Ceres recommends that companies commit to intersectional equity, diversity and inclusion standards across their workforces, including commitments to achieve gender parity and full representation of historically disadvantaged and underrepresented groups across all levels of the organization by 2030. Best practices include:

- **Disclose data annually** on equal employment opportunities via the EEO-1 form for U.S. employees, disaggregated by gender, race, disability, ethnicity and job category.
- **Regularly conduct and disclose the results of internal assessments that examine equity in hiring, retention, job placement, advancement and promotion rates throughout the workforce** (with specific attention to historically disadvantaged and underrepresented groups), identifying instances of unconscious bias.
- **Evaluate policies and practices aimed at fostering inclusion, with specific consideration of the concrete effects of cumulative discrimination** for employees who identify with multiple historically disadvantaged and underrepresented groups (e.g. gender, race, ethnicity, disability, sexual orientation, socio-economic status, etc.), based on acknowledged concepts of intersectionality of employee identity and experience.
- **Assess current business practices and policies** against the United Nations Women's Empowerment Principles, disclose results and publish a CEO statement of support.
- **Create and implement an action plan with concrete and measurable targets for improvement**, identifies solutions to address existing gaps and inequities and establishes clear accountability for management across the organization.
- **Provide resources and forums** (e.g. employee resource groups, etc.) for employees to connect and share grievances and identify solutions that can then be communicated to and addressed by senior management, building on an established Human Rights Due Diligence system.

At minimum, the Commission should consider issuing guidance recommending disclosure that aligns with the recommended best practices described above.

Appendix B: Examples of Ceres Reports Related to Climate Change and Sustainability Risks, Opportunities and Disclosures

Report Title	Date	Relevance
Practicing Responsible Policy Engagement: An assessment of large US companies (forthcoming)	July 2021	This report offers concrete recommendations on how companies can establish systems that address climate change as a systemic risk and integrate this understanding into their direct and indirect lobbying on climate policies. The report is primarily designed for the governance and legal departments of companies charged with determining the appropriate cross-organizational structures to oversee risks and risk responses within a company.
Lifting the Veil: Investor Expectations for Paris-aligned Financial Reporting at Oil and Gas Companies (forthcoming)	June 2021	This report shows how existing U.S. accounting and disclosure principles apply to require oil and gas companies to be transparent to investors about how their choices and strategies bear on their financial statements today.
The Changing Climate for Private Equity	June 2021	<p>This report assesses the state of private equity with regard to the integration of climate issues in investment practices and provides valuable insights to help the industry realize the investment opportunities presented by the transition to a low carbon future.</p> <p>The report's findings were drawn from research which included interviews with 18 private equity General Partners with over \$1.9 trillion total AUM, and nine Limited Partners with a collective \$1.3 trillion total AUM.</p>
Benchmarking Methane and Other GHG Emissions of Oil and Natural Gas Production in the United States	June 2021	Concern over climate change has brought increased focus on methane and greenhouse gas emissions associated with oil and gas production. These emissions, especially methane emissions, can diminish the greenhouse gas benefits of using gas in place of coal and represent a significant source of climate pollution. This report is a collaborative effort using publicly available data to develop comparable metrics that highlight the GHG performance of onshore oil and gas producers in the U.S.
The Role of Natural Climate Solutions in Corporate Climate Commitments: A Brief for Investors	May 2021	This report is a first-of-its-kind engagement tool for investors to spur meaningful dialogue with companies on the role and use of natural climate solutions in delivering on those commitments. It provides clear guidance on how to facilitate engagements with portfolio companies and lays out expectations for climate disclosures—calling for transparency in critical steps along the way to net zero.

Global Investor Engagement on Meat Sourcing: Engaging QSRs on climate and water risks to protein supply chains	April 2021	Two years after investors representing more than \$11 trillion in assets called on six of the largest fast-food companies to mitigate climate and water risks in their meat and dairy supply chains, five of those fast food chains have either set, or stated they will set, science-based emission reduction targets (SBTs). Last year, only one had set an SBT, and another company had announced its intention to set an SBT. This rapid uptake of ambitious pledges in just one year shows the fast food sector is accelerating action on climate amidst rising pressure from investors. Despite this progress, further progress is needed on analyzing and mitigating water risks and performing climate scenario analyses as recommended by the Task Force on Climate-Related Financial Disclosures (TCFD).
Investor Primer on Financial Mechanisms to Incentivize Deforestation-Free Commodity Production	April 2021	This report builds upon Ceres' research that explores the strengths and weaknesses of a wide range of financial mechanisms to incentivize deforestation-free commodity production in the context of Brazilian and West African cocoa supply chains, Indonesian palm oil supply chains, and the Brazilian soy and beef supply chains. It also outlines questions to ask companies during dialogues to assess the value of the incentive mechanisms in relation to the company's overarching no-deforestation goals.
Turning up the Heat: The need for urgent action by US financial regulators in addressing climate risk	April 2021	This report includes a scorecard rating various U.S. financial regulators' progress in addressing the systemic financial risks associated with the climate crisis. It also provides 8 immediate actions U.S. financial regulators should take to address those risks.
Written Testimony of Veena Ramani , Prepared for the U.S. House of Representatives, Committee on Financial Services, Subcommittee on Investor Protection, Entrepreneurship and Capital Markets	February 25, 2021	This testimony was provided at the hearing: " Climate Change and Social Responsibility: Helping corporate boards and investors make decisions for a sustainable world ". Witnesses discussed the need for financial regulation of climate risks and stressed the undue impact of climate and climate risk on communities of color. Ceres' testimony focused on climate risk disclosure.
Ceres 2021 Policy Outlook Business for Innovative Climate and Energy Policy (BICEP) Network	February 2021	This report offers a guide to the climate, energy and clean transportation policies Ceres and BICEP members will focus on in the coming year.
Portfolio Climate Risk Management Case Studies on Evolving Best Practices	December 2020	These case studies offer a snapshot of how the profiled funds and institutions currently address climate risk. The approaches these funds and their peers employ are rapidly evolving as investors learn from both individual and collective experience. Ceres encourages investors at earlier stages of their climate risk-management journeys to review these case

		studies and consider which of these approaches could help guide their responses to climate risk.
Practices for Just, Sustainable and Equitable Development of Clean Energy	December 2020	The U.S. energy sector's shift to clean energy is creating a once-in-a-generation opportunity to build a more just, equitable and sustainable society. As we gear up for necessary acceleration of this energy transition during the next decade, this report recommends the clean energy industry adopt five best practices to help ensure that the transition to clean energy in the U.S. is just, equitable and sustainable
Financing a Net-Zero Economy: Measuring and Addressing Climate Risk for Banks	October 2020	<p>This report investigates banks' climate-related financial risks and their exposure to a disorderly transition to a net zero economy. Based on the finding that a majority of bank lending is in climate-exposed sectors, the report also lays out a blueprint for bank action with recommendations for how banks can discuss their climate risk exposure and the mitigation strategies they can use to address this risk exposure and broader climate-related societal impact.</p> <p>The technical analysis in this report was developed by CLIMAFIN, using a methodology that is the outcome of more than 10 years of scientific research and is being used by European regulators, such as the European Central Bank (ECB) and the European Insurance and Occupational Pensions Authority (EIOPA).</p>
Ceres Roadmap 2030	October 2020	The Ceres Roadmap 2030 is a resource for companies and investors, providing a practical 10-year action plan to help companies strategically navigate the new and ever-changing business reality and thrive in the accelerated transition to a more equitable, just and sustainable economy.
Automaker Roadmap for Climate Scenario Analysis	October 2020	Ceres commissioned this framework to provide guidance for automakers in conducting and utilizing climate scenario analysis in strategic planning and product development. It promotes transparent and consistent methodological approaches to facilitate comparisons with scenarios issued by independent scientific bodies and original equipment manufacturers. Electric and fuel efficient vehicles, and the use models of autonomous and shared vehicles are examples of many factors to be considered in achieving climate scenario outcomes of well below 2°C, with an aspiration toward a 1.5°C warming limit.
BICEP Network's Policy Positions 2009-Present	July 2020	This report lists the Ceres BICEP Network's federal and state policy positions from 2009 to the present.

<u>Blueprint for Responsible Policy Engagement on Climate Change</u>	July 2020	This report offers concrete recommendations on how companies can establish systems that address climate change as a systemic risk and integrate this understanding into their direct and indirect lobbying on climate policies. The Blueprint is primarily designed for the governance and legal departments of companies charged with determining the appropriate cross-organizational structures to oversee risks and risk responses within a company. The report builds on existing resources to identify governance, risk management and policy engagement systems companies can put in place to align their direct and indirect lobbying efforts with climate change science.
<u>Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States</u>	July 2020	This report is the 16th collaborative effort highlighting environmental performance and progress in the nation's electric power sector. The Benchmarking series began in 1997 and uses publicly reported data to compare the emissions performance of the 100 largest power producers in the United States. The company rankings are based on 2018 generation and emissions data and aggregate industry trends are presented through 2019.
<u>Addressing Climate as a Systemic Risk: A call to action for U.S. financial regulators</u>	June 2020	This report makes the case that the climate crisis poses systemic risk to US financial markets, and calls on financial market regulators to take decisive action to address this risk as a part of their existing mandates. It outlines over 50 action steps that could be taken by a range of agencies, including the Federal Reserve, the Securities and Exchange Commission, the Financial Stability Oversight Council, insurance regulators and others.
<u>Investor Guide to Deforestation and Climate Change</u>	June 2020	This guide gives investors a framework to help them understand and engage on deforestation-driven climate risks across their portfolios. It helps investors understand the drivers of deforestation risk and prioritize company engagements based on industries, geographies and sourcing patterns. It also outlines key expectations that investors should be looking for in corporate climate and deforestation commitments and example questions for company and sector engagements.
<u>The Road to Fleet Electrification: Eight ways utilities, regulators, and policymakers can enable fleet operators to electrify commercial transportation and reduce carbon emissions</u>	May 2020	This report outlines eight ways utilities, regulators, and policymakers can enable fleet operators to electrify commercial transportation and reduce carbon emissions.
<u>Strengthening Corporate Sustainable Sourcing</u>	April 2020	Ceres and the Meridian Institute collaborated to conduct an analysis of some of the unique factors associated with U.S. row crop production and water

Commitments for Water Quality in U.S. Row Crops		quality outcomes. This analysis outlines options and best practices for companies working with their supply chains to reduce nutrient and sediment loading, and provides recommendations for developing and implementing strong commitments to incentivize row crop producers to improve water quality outcomes in the U.S. Mississippi River Basin.
Proxy Voting Guidebook 2020: The Business Case for Select Climate-Related Shareholder Proposals	April 2020	This report showcases memos supporting shareholder proposals filed by institutional investors during the 2020 U.S. proxy season. Each memo underscores the risks and opportunities posed by climate change and makes the business case for voting “For” the respective shareholder proposal.
Arizona Renewable Energy Standard and Tariff: 2020 Progress Report	March 2020	Since 2006, the Arizona Renewable Energy Standard and Tariff (REST) has delivered significant benefits to utilities, companies and residents in the form of avoided energy and generation costs, water savings, pollution reduction, technology cost reductions and new jobs. Analysis shows that REST has led to more than \$1.5 billion and \$469 million in gross benefits for the public and customers of Arizona Public Service (APS) and Tucson Electric Power (TEP), respectively. Combined, APS and TEP provide nearly half of the state’s retail electricity sales.
Policy Outlook 2020	February 2020	Businesses can help advance policies across federal and state levels that promote better corporate access to renewable energy, strengthen state renewable portfolio standards and energy efficiency resource standards, transform the clean transportation sector, and overall encourage the growth of a clean energy economy. This report offers a glimpse into the political landscape and the types of policy measures Ceres planned to address in 2020, and highlights corporate engagement opportunities as we look to strengthen policies that help advance a carbon-free economy.
Global Investor Engagement on Meat Sourcing	January 2020	One year after global investors representing more than \$6.5 trillion in assets called on six of the largest fast-food companies to act urgently to mitigate the climate and water risks in their meat and dairy supply chains, Ceres and FAIRR issued this report, which discusses investor requests of companies, trends in company performance, and next steps for the investor coalition.
Running the Risk: How Corporate Boards Can Oversee	November 2019	In this report, Ceres provides guidance to corporate boards on how they can effectively oversee risks posed by ESG issues, including questions for

Environmental, Social and Governance (ESG) Issues		directors to ask management throughout the risk identification, prioritization and mitigation processes. It also offers concrete recommendations for boards looking to improve their companies' resilience in the face of ESG risks.
Feeding Ourselves Thirsty: Tracking Food Company Progress Toward a Water-Smart Future	October 2019	This report provides investors with data on the water risk management practices of 40 major food companies. It also tracks company progress in managing their water risks as compared to performance in 2017 and 2015. This analysis can help food companies identify gaps in management of their water risks, which is critically important to their bottom lines.
Climate Strategy Assessments for the U.S. Electric Power Industry: 2019 Update	August 2019	This analysis gives specific guidance for investors and companies to assess climate change-related risks and opportunities in the U.S. electric power sector. The report incorporates the Intergovernmental Panel on Climate Change's (IPCC) call to limit global warming to 1.5 degrees Celsius, finding that nothing short of a complete decarbonization of the sector before 2050 is in order.
Written Testimony by Mindy Lubber , Prepared for the U.S. House of Representatives, Committee on Financial Services, Subcommittee on Investor Protection, Entrepreneurship and Capital Markets	July 10, 2019	Ceres CEO and President Mindy Lubber testified before the House Financial Services subcommittee on Investor Protection, Entrepreneurship and Capital Markets in support of the Climate Risk Disclosure Act of 2019.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States	June 2019	This analysis examines and compares air pollutant emissions of the 100 largest power producers in the U.S. based on their 2017 generation, plant ownership and air emissions data. The analysis shows that in 2017, for the first year ever, zero-carbon sources took the lead in power generation.
Out On a Limb: The State of Corporate No-Deforestation Commitments & Reporting Indicators that Count	June 2019	This investor brief assesses the state of public corporate commitments around deforestation and lays out the case for elevating two key reporting metrics from companies heading into 2020 reporting deadlines.
Investor Primer on Non-Compliance Protocols: Ending Deforestation at the Source	April 2019	This guide outlines key components of a supplier non-compliance protocol. It provides questions to ask companies in dialogues concerning their non-compliance protocols; explanations of each

		component; and current best practices in noncompliance protocols.
The Role of Investors in Supporting Better Corporate ESG Performance: Influence Strategies for Sustainable and Long-Term Value Creation	April 2019	This report identifies best practice in investor-corporate engagement strategies and proposes a framework for understanding the drivers of successful investor engagement efforts.
Proxy Voting Guidebook 2019: The Business Case for Select Climate-Related Proposals	March 2019	This report showcases memos supporting shareholder proposals filed by institutional investors concerned about the risks and opportunities of climate change to companies in their portfolios. Each memo presents the business case for a shareholder proposal that went to vote during the 2019 proxy season. The resolutions discussed are a sampling of more than 130 climate-related shareholder proposals and cover climate change-related topics including carbon asset risk, greenhouse gas (GHG) reduction goals, high carbon financing, deforestation, lobbying disclosure, sustainability reporting and water impacts.
Scaling U.S. Insurers' Clean Energy Infrastructure Investments: Challenges and Solutions in the Clean Energy Transition	March 2019	This study of insurers' appetites for clean energy infrastructure investing, including wind power, solar power, energy efficiency, and energy storage, sought to identify barriers and solutions to scaling such investments.
Ceres BICEP Network 2019 Policy Outlook	February 2019	This report offered a glimpse into the political landscape and the types of policy measures that will be addressed in 2019.
Change the Conversation: Redefining How Companies Engage Investors on Sustainability	February 2019	This report highlights key trends in investors' evolving expectations for corporate sustainability. It presents nine recommendations to guide companies toward more meaningful and effective investor engagement on ESG issues, helping them to not only meet investor expectations, but also capture competitive advantage.
Measure the Chain: Tools for Managing GHG Emissions in Agricultural Supply Chains	November 2018	This report provides an overview of available resources for assessing emissions from agricultural production and agriculturally-driven land use change.
Setting the Bar: Implementing the TCFD Recommendations for the Oil and Gas Industry	October 2018	This report provides actionable guidance for the oil and gas industry to implement the recommendations of the TCFD in regards to methane emissions.
Disclose What Matters: Bridging the Gap Between Investor	August 2018	This report analyzes the sustainability disclosures of the world's largest companies and finds that most companies are using comparable and industry-wide

Needs and Company Disclosures on Sustainability		disclosure frameworks for reporting sustainability risks and opportunities. However, the analysis finds that only a small percentage of companies disclose the business relevance of these risks and opportunities, and only a handful provide third party assurance on these disclosures.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States (14th Edition)	June 2018	This data analysis examines and compares air pollutant emissions of the 100 largest power producers in the United States based on their 2016 generation, plant ownership and emissions data.
Getting Climate Smart: A Primer for Corporate Directors in a Changing Environment	May 2018	This primer is designed to help corporate directors get out in front of climate change issues. It also helps directors understand why climate change is a board-relevant issue, when climate change should fall within their mandate and how they can oversee climate-related risks and opportunities.
Systems Rule: How Board Governance Can Drive Sustainability Performance	May 2018	This report provides key insights into the elements that lead to effective board governance for sustainability to help investors, companies and advocates decide how to focus their efforts. The analysis showed positive relationships between companies whose boards incorporated recommended systems and sustainability outcomes.
In Sight of the Clean Trillion: Update on an Expanding Landscape of Investor Opportunities	May 2018	This report highlights the need for an additional \$1 trillion per year in clean energy investment to avoid the worst impacts of climate change. The report points to significant opportunities for investors to scale up their clean energy investments while simultaneously meeting their risk-return requirements.
Climate Strategy Assessments for the U.S. Electric Power Industry: Assessing Risks and Opportunities Associated with a well-below 2-Degree Transition and the Physical Impacts of Climate Change	April 2018	This framework provides specific guidance for assessing climate change-related risks and opportunities for companies in the U.S. electric power industry. Building on existing literature, the framework outlines an approach companies can use to develop their own climate strategy assessment.
Zooming In: Companies, Commodities and Traceability Commitments that Count	March 2018	This analysis examines how companies that are committed to addressing commodity-driven deforestation are tracing supplies to their origin to determine the impact their supply chains have on forests.
Proxy Voting Guidebook 2018: The Business Case for Climate-Related Proposals	March 2018	This report is a compilation of memos written by investor members and allies of the Ceres Investor Network. It explores the business case and rationale

Examples that Deserve Your Vote		for various climate- and ESG-related shareholder proposals in U.S.-based companies for 2018 annual meetings.
Ceres BICEP Network: 2018 Policy Outlook	March 2018	This report highlights Ceres' top policy priorities at the federal and state level in 2018, along with our work on two regional projects. This outlook is designed to serve as a useful planning tool for companies to align their policy priorities and resources with those we have set forth.
TURNING POINT: Corporate Progress on the Ceres Roadmap for Sustainability	February 2018	This report offers valuable insights for companies, investors, and advocates into how more than 600 of the largest publicly traded companies in the United States are positioned to address critical sustainability issues such as climate change, water pollution and scarcity and human rights abuses.
Case Study Series: Business Risks from Deforestation	November 2017	This report examines the potential business risks for companies that source commodities from areas with deforestation.
Clean Tech 3.0: Venture Capital Investing in Early Stage Clean Energy A Changing Investment Climate	November 2017	This paper makes the case that the opportunities for investing in early stage clean energy technology companies have changed significantly and favorably in recent years to offer the potential for greater risk adjusted returns in the sector than ever before. The report examines what went wrong in prior cycles of venture capital investing in this sector and how markets, teams, and strategies have changed recently to fundamentally improve the investment landscape.
Accelerating Investment in Electric Vehicle Charging Infrastructure: Estimated Needs in Selected Utility Service Territories in Seven States	November 2017	This report evaluates the total need for electric vehicle charging infrastructure—including private chargers at vehicle owners' homes and publicly accessible chargers—to accommodate plug-in electric vehicles in the twelve largest utility service territories in the states of California, Georgia, Maryland, Massachusetts, New York, Ohio, and Pennsylvania.
Lead From the Top: Building Sustainability Competence On Corporate Boards	September 2017	This report details how boards can successfully integrate sustainability into their governance systems by raising their own competence on material sustainability issues to enable effective oversight. The report focuses on the skills and experience needed for board members to provide thoughtful oversight of sustainability risks and opportunities, in addition to the tools and processes that can help foster deeper engagement at the board level around these issues.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States	June 2017	This report examines and compares the stack air pollutant emissions of the 100 largest power producers in the United States based on their 2015 generation, plant ownership, and emissions data.

Investor Climate Compass: Oil and Gas	May 2017	This report shows how through persistent engagement on climate change risks – either via private dialogue or through public engagement using shareholder resolutions, or both – institutional investors are having a major influence on the conduct and board level decision-making of key oil and gas majors.
Power Forward 3.0: How the largest U.S. companies are capturing business value while addressing climate change	April 2017	This report examines clean energy and climate targets from the U.S. Fortune 500 to analyze trends in renewable energy, energy efficiency and greenhouse gas targets. The report also assesses progress companies have made in meeting their targets and attempts to identify why certain companies choose not to set climate-related targets.
The Business Case for the Current SEC Shareholder Proposal Process	April 2017	This paper provides an investor perspective on the value to investors and companies of the current shareholder proposal process under SEC Rule 14a-8. It is intended as a resource to help inform policy discussions about the content of Rule 14a-8 and the impact of shareholder proposals on corporate issuers, shareholder value and the U.S. economy.
Ceres Investor Network: Year In Review 2016-2017	April 2017	This report provides an overview of the efforts by the Ceres Investor Network on Climate Risk and Sustainability's to advance leading investment practices, corporate engagement strategies and policy solutions to build an equitable, sustainable global economy from 2016-2017.
Investors Have Their Say on Sustainability and Stock Exchanges: Feedback on the WFE ESG Guidance and Recommendations	April 2017	This report is based on a survey of investors, including pension funds, asset managers and foundations, and experts at investor advisor and disclosure organizations, about the World Federation of Exchanges. The report identifies key feedback and insights to help the World Federation of Exchanges and individual global exchanges adapt the World Federation of Exchanges' issued set of guidelines on sustainability integration and disclosure to make it more valuable and relevant to investors.
A Framework For 2 Degrees Scenario: Analysis A Guide for Oil and Gas Companies and Investors for Navigating the Energy Transition	December 2016	This resource seeks to enhance the current practice of scenario analysis and provide decision-useful insights that will help oil and gas companies mitigate the vulnerabilities they face as energy markets transition to a low carbon future.
Insurer Climate Risk Disclosure Survey Report & Scorecard: 2016 Findings and Recommendations	October 2016	This report evaluates and benchmarks the quality and comprehensiveness of climate risk disclosures by insurance companies in response to the National Association of Insurance Commissioners Climate Risk

		Disclosure Survey. The aim of the analysis is to provide regulators, insurers, investors and other stakeholders with substantive information about the risks insurers face from climate change and steps insurers are taking to respond to those challenges. The report also offers recommendations for insurers and regulators to improve their management and disclosure on wide-ranging climate risks.
Private-Public Partnerships to Advance Low-Carbon State Energy Policies: A NASEO-Ceres Issue Brief	September 2016	This white paper identifies key pieces of information that state energy policymakers and U.S. companies and investors should know about one another. It offers a “deeper dive” on a series of energy policy topics — including clean energy policies, financing mechanisms, and corporate sustainability approaches — on which both state and company/investor representatives can find common ground.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States 2016	July 2016	This report analyzed publicly reported data on carbon dioxide, nitrogen oxides, sulfur dioxide, and mercury emissions from the nation’s 100 largest electric power producers, which accounted for 85 percent of the nation’s power production. The report concludes that since 2000 emissions of all four major pollutants have dropped while total electricity generation and the American economy have grown.
The 21st Century Investor: Ceres Blueprint for Sustainable Investing	June 2016	This report is written for institutional investors who need to understand and manage the growing risks posed by climate change, resource scarcity, population growth, human and labor rights, energy demand and access to water—risks that will challenge businesses and affect investment returns in the years and decades to come.
Benchmarking Utility Clean Energy Deployment: 2016	June 2016	This report provides a window into how the global transition toward clean energy is playing out in the U.S. electric power sector. The report reveals the extent to which 30 of the largest U.S. investor-owned electric utility holding companies are increasingly deploying clean energy resources to meet customer needs.
Assets or Liabilities? Fossil Fuel Investments of Leading U.S. Insurers	May 2016	This report focuses on climate-related risks to insurance companies, including both credit risk from massive bond and equity holdings and systemic/market risk from macroeconomic factors. Given the crucial role of insurers in providing a safety net in the face of climate change, the report examines the 40 largest U.S. insurance group’s investments

		(bonds, common stock, and preferred stock) in the oil and gas, coal and electric/gas utilities sectors.
Mapping the Gap: The Road From Paris	January 2016	This report examines total volumes of capital that are required to fund clean energy power project development in the electric power sector. The report includes key findings detailing total capital required under the New Energy Outlook ("NEO") 2°C as well as future finance pathways for commercial financiers, institutional investors and others.
Pathway to a 21st Century Electric Utility	November 2015	This paper proposes several solutions to address the utility revenue challenge as an alternative to increased fixed charges, such as inclining block rates, reforming net energy metering, use of bidirectional meters, time-of-use rates, accountability incentives and identifying new revenue opportunities for utilities. This paper proposes a new pathway to a 21st Century Electric Utility system that creates benefits for customers, policymakers, utility capital providers and competitive service providers.
Carbon Asset Risk: From Rhetoric to Action	October 2015	This report discusses developments in carbon asset risk and provides the first attempt at quantifying the uptake of carbon asset risk assessment and management. The report shows that carbon asset risk has moved from discussion and acknowledgement to action and impact.
View From the Top: How Corporate Boards Engage on Sustainability Performance	October 2015	This report identifies key strategies for effective board engagement that can produce tangible environmental and social impacts.
Shareholders Spur Action On Climate Change: Company Commitments From the 2014 & 2015 Proxy Seasons	October 2015	This report tracks the implementation of climate change-related corporate commitments made in response to shareholder proposals and dialogues in 2014 and 2015.
Accelerating U.S. Clean Energy Deployment: Investor Policy Priorities	August 2015	This paper connects the Clean Trillion goal - an estimate that an additional \$1 trillion in incremental financing for clean energy is needed to keep global temperature increases below two degrees Celsius - to the 2015 United States climate and clean energy policy framework, which is a mixture of federal, state, and local initiatives.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States 2015	July 2015	This report highlights environmental performance and progress in the nation's electric power sector. The series uses publicly reported data to compare the emissions performance of the 100 largest power producers in the United States.

Carbon Asset Risk: A Review of Progress and Opportunities	June 2015	This report chronicles major shifts in the financial landscape since the Ceres/Carbon Tracker Initiative carbon asset risk collaboration began. Some of these changes can be linked directly to actions or progress achieved through the Carbon Asset Risk Initiative or its many collaborative partners, while others are more indicative of the increased relevance of the carbon asset risk framing around wasted capital, stranded assets and unburnable carbon.
21st Century Engagement: Investor Strategies for Incorporating ESG Considerations into Corporate Interactions	May 2015	<p>The is a guide for U.S. institutional investors on engaging with companies and policymakers on sustainability issues and includes tactics and case studies from 37 engagement experts spanning six countries.</p> <p>The guide also features a set of ESG-themed questions that portfolio managers and analysts should be asking of companies in key sectors.</p>
Investor Network on Climate Risk: Year in Review 2014-2015	May 2015	This report highlights the key activities, events and initiatives undertaken by the Investor Network on Climate Risk from June 2014 through early 2015.
Practicing Risk-Aware Electricity Regulation: 2014 Update	November 2014	This report looks at key trends that continue to reshape the U.S. electricity industry, analyzes changing costs and risk profiles of energy resources (especially renewable energy), and offers further insights and recommendations for smart, “risk-aware” decision-making by utility regulators. The report concludes that almost without exception the riskiest investments for utilities—the ones that could cause the most financial harm for utilities, ratepayers and investors—are large base load fossil fuel and nuclear plants.
Insurer Climate Risk Disclosure Survey Report & Scorecard: 2014 Findings & Recommendations	October 2014	This report summarizes responses from insurance companies to a survey on climate change risks developed by the National Association of Insurance Commissioners. The aim of the survey is to provide regulators, insurers, investors and other stakeholders with substantive information about the risks insurers face from climate change and the steps insurers are taking — or are not taking — to respond to those risks.
Benchmarking Utility Clean Energy Deployment	July 2014	This report assembles data from more than 10 sources, including state Renewable Portfolio Standard (RPS) annual reports, U.S. Securities and Exchange Commission 10-K filings and Public Utility Commission reports, to show how 32 of the largest

		U.S. investor-owned electric utility holding companies stack up on renewable energy and energy efficiency.
Power Forward 2.0: How American Companies Are Setting Clean Energy Targets and Capturing Greater Business Value	June 2014	This report on Fortune 500 clean energy commitments is intended to inform companies, investors, the electric power sector, and state and federal policymakers on trends and preferences among large corporate renewable energy buyers. It is also intended to encourage companies in and out of the Fortune 500 to understand the value of setting renewable energy, energy efficiency, and greenhouse gas emissions reduction commitments.
Water & Climate Risks Facing U.S. Corn Production	June 2014	This report provides new data and interactive maps on the risks facing U.S. corn production, as well as detailed recommendations for how corn-buying companies and their investors can catalyze more sustainable agricultural practices that will reduce these risks, preserve and enhance yields, and protect precious water resources.
Measuring & Mitigating Water Revenue Variability: Understanding How Pricing Can Advance Conservation Without Undermining Utilities' Revenue Goals	June 2014	This report examines real financial and water use data from three North American water utilities to demonstrate how rate structures can mitigate or intensify revenue variability. It also introduces alternative financial and pricing strategies that can assist water utilities in stabilizing revenue without compromising the commitment to water conservation.
Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States 2014	May 2014	This report examines and compares the stack air pollutant emissions of the 100 largest power producers in the United States based on their 2012 generation, plant ownership, and emissions data and shows a downward trend in nitrogen oxides (NOx), sulfur dioxides (SO2), mercury and carbon dioxide (CO2) since 2000, with CO2 emissions decreasing 13 percent between 2008 and 2012. The findings show that the industry is shifting toward a combination of increased energy efficiency and lower carbon fuel sources.
Gaining Ground: Corporate Progress on the Ceres Roadmap for Sustainability 2014 Progress Report	April 2014	This report evaluates how well 613 of the largest, publicly traded U.S. companies are integrating sustainability into their business systems and decision-making. The report assesses corporate progress across the four strategic areas: Governance, Stakeholder Engagement, Disclosure and Performance.
Investor Listing Standards Proposal: Recommendations for	March 2014	This document is a proposal and set of investor recommendations on a stock exchange listing

Stock Exchange Requirements on Corporate Sustainability Reporting		standard focused on corporate sustainability disclosure. The aim of the proposal is to establish key elements of a minimum global standard for corporate sustainability reporting that would provide investors with improvements in the quality and depth of sustainability information being reported in each market.
Cool Response: The SEC & Corporate Climate Change Reporting: SEC Climate Guidance & S&P 500 Reporting—2010 to 2013	February 2014	This report examines the state of corporate reporting and associated SEC comment letters on climate change. It also provides recommendations for the SEC and companies on improving the quality of reporting.
Investor Guide on Fracking Water Use and Disposal Issues	February 2014	This guide lays out suggested discussion themes for company engagement on hydraulic fracturing risks that should provide investors with a deeper understanding of water use and disposal issues.
Green Bond Principles 2014: Voluntary Process Guidelines for Issuing Green Bonds	January 2014	The Green Bond Principles (GBP) are voluntary process guidelines that recommend transparency and disclosure and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.
Investing in the Clean Trillion: Closing The Clean Energy Investment Gap	January 2014	This report provides 10 recommendations for investors, companies and policymakers to increase annual global investment in clean energy to at least \$1 trillion by 2030.
Building Climate Resilience in Cities: Priorities for Collaborative Action	December 2013	This report distills the key priorities of urban resilience stakeholders, including city officials, major infrastructure providers and insurers, to build climate resilience in cities. It offers lessons learned and practical recommendations for collaborative action.
Building Resilient Cities: From Risk Assessment to Redevelopment	December 2013	This paper presents a four-stage strategic planning framework to implement in the second stage of climate adaptation planning, following the completion of local vulnerability and risk assessments. The framework focuses on the development of zones of highly resilient infrastructure, services, property performance, factoring each area's distinct functions, vulnerabilities and exposures, and its current (re)development priorities.
Guide for Responsible Corporate Engagement in Climate Policy	November 2013	This report is designed to help companies inform and accelerate the policies most urgently needed to support a stable global economy. It is designed to help businesses engage in national and international



		debates, with a view to contribute to political progress on reducing carbon dioxide and other greenhouse gas emissions, and adapt to disruptions in the global climate system.
Inaction on Climate Change: The Cost to Taxpayers	October 2013	This report examines the full costs of public programs that pay for disaster relief and recovery from extreme weather events—ad hoc disaster assistance appropriations, flood insurance, crop insurance, wildfire protection, and state run “residual market” insurance programs—to understand the price to U.S. taxpayers of inaction on climate change.
Navigating Climate Risk: Ceres' Primer for Family Offices	September 2013	This primer provides nine action steps that family offices can take toward integrating climate risk considerations into their investment portfolios.
Assessing Water System Revenue Risk: Considerations for Market Analysts	August 2013	This report offers an analysis of revenue risk using actual utility data in three states that are experiencing changing water use patterns: Colorado, North Carolina and Texas. The analysis demonstrates that utilities with the same generic pricing structure can have widely variable exposure to revenue instability from changes in customer use. This analysis reinforces the need for a continued focus by market analysts on the pricing structures of utilities and the relationship of those practices to fiscal condition and public policy imperatives including conservation and affordability.
Global Investor Survey on Climate Change 2013	August 2013	This third global survey of climate-related investment practices reveals results consistent with the prior year's results: while members of the investor networks surveyed continue to show a strong commitment to addressing climate change in their investment activities, translating that commitment into investment decisions that reduce climate risks to portfolios and leverage climate-related investment opportunities remains a challenge. Leading investors continue to advance their climate-related investment practices, and are prepared to do significantly more with the appropriate policy signals.
Flaring Up: North Dakota Natural Gas Flaring More Than Doubles in Two Years	July 2013	This report analyzes oil and gas production data published by the North Dakota Industrial Commission and calculates that volumes of flared gas more than doubled between May 2011 and May 2013. In 2012 alone, flaring resulted in the loss of approximately \$1 billion in fuel and the greenhouse gas emissions equivalent to adding nearly one million cars to the road.



<u>California's Low Carbon Fuel Standard: Compliance Outlook for 2020</u>	June 2013	This report represents the first phase of a two-phase, year-long project assessing the economic and environmental impacts of compliance with California's Low Carbon Fuel Standard out to 2020. This phase focuses on the development of compliance scenarios based on market research, consultation with stakeholders, and market forecasts based on best estimates of fuel availability.
<u>Power Factor: Institutional Investors' Policy Priorities Can Bring Energy Efficiency to Scale</u>	May 2013	<p>For this report, investors and energy efficiency experts gathered to identify energy efficiency policy priorities from the perspective of institutional investors. Project participants were selected to represent a diverse cross sampling of energy efficiency financiers, institutional investors and policy experts.</p> <p>Participants cited three key areas of policy—utility regulatory policies, demand-producing policies and finance policies—as those most needed to drive the energy efficiency investment opportunity.</p>
<u>Proxy Voting for Sustainability</u>	May 2013	This report serves as a resource guide to help global investors respond to environmental, social and governance (ESG) issues that are increasingly the subject of shareholder resolutions filed with United States publicly held corporations. This first-of-its-kind report lays out four sets of principles on governance, social issues, general sustainability and environmental performance to guide investors' voting on specific resolutions addressing these topics.
<u>Benchmarking Air Emissions 2013</u>	May 2013	This report analyzes emissions from the 100 largest power producers in the United States. The report shows that the electric industry cut emissions of NOx, SO2 and CO2 in 2011 even as overall electricity generation increased, largely due to increased use of natural gas and growing reliance on renewable energy.
<u>Hydraulic Fracturing & Water Stress: Growing Competitive Pressures for Water</u>	May 2013	This research paper analyzes water use in hydraulic fracturing operations across the United States and the extent to which this activity is taking place in water stressed regions. It provides an overview of efforts underway, such as the use of recycled water and non-freshwater resources, to mitigate these impacts and suggests key questions that industry, water managers and investors should be asking.
<u>Disclosure Framework for Water and Sewer Enterprises</u>	April 2013	This framework was created through outreach to stakeholders on the buy- and sell-sides of the market, including large water and wastewater systems and more than a dozen institutional investors with \$40 billion in assets under management. The framework entails six key areas of disclosure.





<u>Insurer Climate Risk Disclosure Survey: 2012 Findings and Recommendations</u>	March 2013	This report summarizes responses from insurance companies to a survey on climate risk developed by the National Association of Insurance Commissioners. The aim of the survey and analysis of the responses is to provide regulators with substantive information about the risks to insurers posed by climate change, as well as steps insurers are taking in response to their understanding of climate change risks.
<u>Power Forward: Why the World's Largest Companies are Investing in Renewable Energy</u>	December 2012	This report shows that a majority of Fortune 100 companies have set a renewable energy commitment, a greenhouse gas emissions reduction commitment or both. The trend is even stronger internationally, as more than two-thirds of Fortune's Global 100 have set the same commitments. Through two dozen interviews with Fortune and Global 100 executives and analysis of public disclosures, the report finds that clean energy practices are becoming standard procedures for some of the largest and most profitable companies in the world.
<u>Improving Workers' Well-Being: A New Approach to Supply Chain Engagement</u>	October 2012	This report presents the core components of a proposed approach to engaging suppliers to improve worker well-being. The report presents a summary of key stakeholder feedback and guidance gathered through Ceres' led dialogues.
<u>Stormy Future for Insurers: The Growing Costs and Risks of Extreme Weather Events</u>	September 2012	This report examines how extreme weather trends may be a harbinger of significant challenges ahead for the insurance industry, which is already confronting profitability and growth challenges. This analysis is based on a careful review of U.S. property/casualty insurance industry financial results.
<u>The Road to 2020: Corporate Progress on the Ceres Roadmap for Sustainability</u>	April 2012	This report assesses how U.S. businesses are progressing on sustainability and uses a framework for integrating sustainability across a company's entire enterprise. Specifically, it evaluates where 600 large publicly traded companies stand on sustainability issues in terms of governance, stakeholder engagement, disclosure and performance.
<u>Practicing Risk-Aware Electricity Regulation: What Every State Regulator Needs to Know</u>	April 2012	This report seeks to provide regulators with a thorough discussion of risk, and to suggest an approach—"risk-aware regulation"—whereby regulators can explicitly and proactively seek to identify, understand and minimize the risks associated with electric utility resource investment.
<u>The Ceres Aqua Gauge: A Framework for 21st Century Water Risk</u>	April 2012	This report introduces a framework for assessing corporate management of water risk. The report provides a broad overview of how competing freshwater demands and limits to supply are beginning to affect corporate financial performance in a range of industrial sectors. The report also identifies



		trends in corporate and investor responses to emerging water issues and explains how investors can identify holdings in their portfolios more likely to be exposed to water-related risks.
More Jobs Per Gallon: How Strong Fuel Economy/GHG Standards Will Fuel American Jobs	June 2011	This report focuses on the economic impacts of strengthening fuel economy and greenhouse gas (GHG) emission standards for passenger vehicles sold in the United States. The analysis finds that stronger standards—more miles and fewer emissions per gallon—would lead to greater economic and job growth, both within the auto industry and in the broader economy as a whole.
The Ripple Effect: Water Risk in the Municipal Bond Market	October 2010	This report evaluates and ranks water scarcity risks for public water and power utilities in some of the country's most water-stressed regions, including Los Angeles, Phoenix, Dallas and Atlanta.
The 21st Century Corporation: The Ceres Roadmap for Sustainability	March 2010	This paper outlines Ceres' vision and expectations for corporate best practices on sustainability. The roadmap details key performance areas for measuring how companies are progressing on sustainability. The paper lays out four broad areas of activity that companies should focus on and achieve by 2020. Those areas include governance, stakeholder engagement, disclosure and performance.

Appendix C: Examples of Organizational and Individual Support of the TCFD



Organization	Entity Description	Positioning on TCFD	Source Link
<p>International Accounting Standards Board</p> 	<p>The International Accounting Standards Board (IASB) is an independent, private-sector body that develops and approves International Financial Reporting Standards (IFRSs). The IASB operates under the oversight of the IFRS Foundation.</p>	<p>The Trustees of the IFRS Foundation announced the formation of a working group to accelerate convergence in global sustainability reporting standards focused on enterprise value and to undertake technical preparation for a potential international sustainability reporting standards board under the governance of the IFRS Foundation.</p> <p>Specifically, the working group will provide technical recommendations, including further development of the prototype built on the TCFD recommendations, as a potential basis for the new board to build on existing initiatives and develop standards for climate-related reporting and other sustainability topics.</p>	<p>https://www.ifs.org/news-and-events/news/2021/03/trustees-announce-working-group/</p>
	<p>The Sustainability Accounting Standards Board (SASB) is an independent nonprofit organization that sets standards to guide the disclosure of financially material sustainability information by companies to their investors.</p>	<p>"SASB and the TCFD share the belief that climate change is one of the biggest economic risks the world faces today. As such, SASB and the TCFD believe that climate risk is often material, and as such, disclosure belongs in mainstream financial filings. The TCFD report has made a great contribution to the dialogue by dispassionately presenting climate impacts in terms of their financial risks to companies and their investors, which makes it relevant and actionable by the markets."</p>	<p>https://www.sasb.org/blog/supporting-work-tcf/</p>

<p>Global Reporting Initiative</p> 	<p>GRI (Global Reporting Initiative) is the independent, international organization that helps businesses and other organizations take responsibility for their impacts, by providing them with the global common language to communicate those impacts.</p>	<p>GRI is a member of the Corporate Reporting Dialogue (CRD), a platform launched in 2014 to promote greater coherence, consistency and comparability between frameworks, standards and related requirements. In June 2019, the CRD published Driving Alignment in Climate-related Reporting, which found that participating organizations are closely aligned on the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.</p>	<p>https://www.globalreporting.org/public-policy-partnerships/the-reporting-landscape/</p>
	<p>The Network for Greening the Financial System (NGFS) is a network of 83 central banks and financial supervisors that aims to accelerate the scaling up of green finance and develop recommendations for central banks' role for climate change.</p>	<p>The NGFS emphasises the importance of a robust and internationally consistent climate and environmental disclosure framework. NGFS members collectively pledge their support for the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). The NGFS encourages all companies issuing public debt or equity as well as financial sector institutions to disclose in line with the TCFD recommendations. The NGFS recommends that policymakers and supervisors consider further actions to foster a broader adoption of the TCFD recommendations and the development of an internationally consistent environmental disclosure framework.</p>	<p>https://www.mainstreamingclimate.org/publication/ngfs-a-call-for-action-climate-change-as-a-source-of-financial-risk/#:~:text=their%20support%20for%20the%20recommendations,line%20with%20the%20TCFD%20recommendations.</p>



	<p>A sister organization of the World Bank and member of the World Bank Group, the IFC is the largest global development institution focused on the private sector in emerging markets.</p>	<p>The IFC has become the first multilateral development institution to disclose climate-related risk under the guidelines of the Task Force on Climate-related Financial Disclosure (TCFD), joining a number of entities that are taking steps to identify and mitigate climate-related financial risk. The disclosure was made in IFC's 2018 Annual Report.</p>	<p>https://pressroom.ifc.org/all/pages/PressDetail.aspx?ID=18395</p>
 <p>European Bank for Reconstruction and Development</p>	<p>The European Bank for Reconstruction and Development (EBRD) was established to help build a new, post-Cold War era in Central and Eastern Europe. It has since invested almost €150 billion in a total of more than 6,000 projects.</p>	<p>The EBRD published its first stand-alone report on the Task Force on Climate-Related Financial Disclosures (TCFD). This report outlines its plans to comply with TCFD recommendations and its support to clients to implement TCFD recommendations.</p>	<p>https://www.ebrd.com/documents/environment/tcfd-report-2019.pdf?blobnochange=true</p>
<p>European Central Bank</p> 	<p>The European Central Bank (ECB) is the central bank of the Eurozone, a monetary union of 19 EU member states which employ the euro.</p>	<p>The Eurosystem aims to start making annual climate-related disclosures for applying sustainable and responsible investment principles in the euro-denominated non-monetary policy within the next two years, using the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) as the initial framework and reporting, as a minimum, in the category of metrics and targets. Several Eurosystem central banks already make climate-related disclosures for some of their non-monetary policy portfolios.</p>	<p>https://www.ecb.europa.eu/press/pr/date/2021/html/ecb.pr210204_1~a720bc4f03.en.html</p>
	<p>The International Organization of Securities Commissions (IOSCO) is</p>	<p>“IOSCO welcomes the initiative of the alliance of leading sustainability reporting</p>	<p>https://www.iosco.org/news/pdf/IOSC</p>

	<p>the international body that brings together the world's securities regulators and is recognized as the global standard setter for the securities sector.</p>	<p>organisations (“the Alliance”) and efforts to explore how the combination of their respective principles, frameworks, and guidance can form the basis for a future common set of international standards for sustainability-related disclosures. The Alliance published a prototype for an approach to climate-related disclosures that builds on the recommendations of the Task Force of Climate-related Financial Disclosures (TCFD) and adopted the form and structure of the IFRS Foundation’s financial reporting standards. IOSCO welcomes these efforts and encourages further consideration of this prototype as a potential basis for the SSB to develop climate-related reporting standards.”</p>	<p>ONEWS594.pdf</p>
	<p>CDP is an international non-profit organisation based in the United Kingdom, Germany and the United States of America that helps companies and cities disclose their environmental impact.</p>	<p>In 2018, CDP redesigned its climate change questionnaire to align with the TCFD’s guidelines – specifically, adding 25 TCFD-aligned questions contained within the Governance, Risks & Opportunities, Strategy, Targets and Emissions modules. These TCFD-aligned questions include specific methodologies for high impact sectors such as financial services, energy, agriculture, transport and materials.</p>	<p>https://www.cdp.net/en/articles/climate/on-the-5-year-anniversary-of-the-tcf-d-a-critical-reminder-to-companies</p>
	<p>The Climate Disclosure Standards Board (CDSB) is an international consortium of business and environmental NGOs, which is committed to advancing and aligning the global mainstream corporate reporting model</p>	<p>The CDSB has supported the TCFD’s work in various ways. For example, CDSB and SASB have created a handbook that provides real-world examples of TCFD reporting to help companies better understand how they can more effectively communicate with investors</p>	<p>https://www.cdsb.net/tcfd-good-practice-handbook</p>

	to equate natural capital with financial capital.	about the financially material climate-related risks and opportunities they face.	
	The International Integrated Reporting Council (IIRC) is a global coalition of regulators, investors, companies, standard setters, the accounting profession, academia and NGOs. The coalition promotes communication about value creation, preservation and erosion as the next step in the evolution of corporate reporting .	CDP, CDSB, GRI, IIRC, and SASB have co-authored an illustration of how their current frameworks, standards and platforms, along with the elements set out by the TCFD, can be used together to provide a “running start” for development of global standards that enable disclosure of how sustainability matters create or erode enterprise value.	https://integratedreporting.org/news/global-sustainability-and-integrated-reporting-organizations-launch-prototype-climate-related-financial-disclosure-standard/
	The Global Association of Risk Professionals (GARP) is a professional association for risk managers, dedicated to the advancement of the risk profession through education, research and the promotion of best practices globally.	The GARP Risk Institute has completed two annual global surveys of climate risk management at financial firms, structured around the main reporting themes developed by the TCFD.	https://climate.garp.org/wp-content/uploads/2020/05/GRI_ClimateSurvey_051320.pdf
<p>Federal Reserve System, Governor Lael Brainard</p> 	The Federal Reserve System is the central bank of the United States of America.	“We also benefit from working with international peers who are taking the lead on understanding the effects of climate-related risks on their financial systems. We are participating in climate-related discussions at the FSB and other standard-setting bodies, and we will continue to support the work of the FSB's TCFD in order to improve standardization of financial disclosures related to climate change.”	https://www.federalreserve.gov/newsevents/speech/brainard20191108a.htm
Commodity Futures Trading Commission (CFTC) Market Risk Advisory Committee's	The Subcommittee was established to provide a report to the MRAC that will identify and examine	“Regarding governance and risk management disclosure, regulators should consider the TCFD's recommendations	https://www.cftc.gov/sites/default/files/2020-09/9-9-

<p>(MRAC) Climate-Related Market Risk Subcommittee</p>	<p>climate related financial and market risks.</p>	<p>and the Committee of Sponsoring Organizations of the Treadway Commission/World Business Council for Sustainable Development (COSO/WBCSD) guidance, applying enterprise risk management to environmental, social and governance-related risks.”</p>	<p>2020 Report of the Subcommittee on Climate-Related Market Risk Management in the U.S. Financial System for posting.pdf</p>
	<p>New York State Department of Financial Services is the department of the New York state government responsible for regulating financial services and products, including those subject to the New York insurance, banking and financial services laws.</p>	<p>“DFS expects insurers to engage with the TCFD framework and other similar initiatives, including the tools and case studies that they provide, in developing their approach to climate-related financial disclosures. The NAIC Climate Risk Disclosure Survey allowed a TCFD report to be submitted in lieu of responding to the survey in its 2020 cycle. The CDP, Sustainability Accounting Standards Board, Climate Disclosure Standards Board, and others have also developed implementation guides and questionnaires on the TCFD framework.”</p>	<p>https://www.dfs.ny.gov/system/files/documents/2021/03/proposed_ins_climate_guidance_2021_public_comment_1.pdf</p>
	<p>The National Association of Insurance Commissioners (NAIC) is the U.S. standard-setting and regulatory support organization created and governed by the chief insurance regulators from the 50 states, the District of Columbia, and five U.S. territories.</p>	<p>The NAIC annual climate risk disclosure survey covers nearly 1000 companies that write more than \$100 million per year in premiums nationally, capturing more than 70% of the entire U.S. insurance market. Companies can submit a TCFD report in lieu of filling out the survey. The NAIC Climate and Resiliency (EX) Task Force is considering “modifications to the</p>	<p>https://content.naic.org/climate-resiliency-resource.htm</p>

		Climate Risk Disclosure [survey] to align with Task Force on Climate-related Financial Disclosures (TCFD) and promote uniformity in reporting requirements.”	
<p>Remarks by Tobias Adrian, Financial Counsellor and Director of the Monetary and Capital Markets Department, IMF New Economy Forum, 2021 Spring Meetings</p> 	<p>The International Monetary Fund (IMF) is an organization of 190 countries, working to foster global monetary cooperation, secure financial stability, facilitate international trade, promote high employment and sustainable economic growth, and reduce poverty around the world.</p>	<p>“We encourage the use of the insights of the Task Force on Climate-related Financial Disclosures (TCFD) as a framework to build on, and we believe that the TCFD — which has gained strong support — can serve as a basis for greater climate-related disclosures.”</p>	<p>https://www.imf.org/en/News/Articles/2021/04/01/sp040121-disclosure-and-data-on-climate-change</p>
<p>Corporate Reporting Dialogue</p>	<p>The Corporate Reporting Dialogue is a platform, convened by the International Integrated Reporting Council, to promote greater coherence, consistency and comparability between corporate reporting frameworks, standards and related requirements.</p>	<p>The Corporate Reporting Dialogue participants have released a report showing high levels of alignment between their reporting frameworks on the basis of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.</p>	<p>https://corporatereportingdialogue.com/publication/driving-alignment-in-climate-related-reporting/</p>
	<p>The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system.</p>	<p>“The FSB strongly encourages the IFRS Foundation to build on the work of the TCFD, by using the TCFD’s recommendations as the basis for standards for climate-related financial disclosures. The TCFD recommendations set out a comprehensive framework that has been developed by, and is directly responsive to the needs of, users and preparers of financial filings across a range</p>	<p>https://www.fsb.org/2020/12/fsb-encourages-the-ifrs-foundation-and-authorities-to-use-tcfd-recommendations-as-the-basis-for-climate-related-financial-risk-disclosure</p>

		of financial and non-financial sectors around the world.”	es/
	<p>United Nations Environment Programme Finance Initiative (UNEP FI) is a partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. It works with more than 350 members – banks, insurers, and investors – to help create a financial sector that serves people and planet while delivering positive impacts.</p>	<p>“By systematically engaging global stakeholders, our new TCFD programs will help financial institutions add depth, granularity, and nuance to their climate risk assessments, consolidate best practices in climate risk management, and help standardize climate disclosures across the industry.”</p>	https://www.unepfi.org/climate-change/tcfd/
	<p>PRI is a proponent of responsible investment. It works to understand the investment implications of environmental, social and governance (ESG) factors; And to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions.</p>	<p>“Supporting the adoption of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) is a high priority for the PRI as they provide a global framework for translating information about climate into financial metrics. . . . As part of our programme on championing climate action, in 2018, the PRI introduced TCFD-aligned indicators to its Reporting Framework.”</p>	https://www.unpri.org/news-and-press/tcfd-based-reporting-to-become-mandatory-for-pri-signatories-in-2020/4116.article