Response to: Vile No. S7-10-22, the Enhancement and Standardization of Climate-Related Disclosure for Investors.

THE ENVIRONMENTAL, SOCIAL, GOVERNANCE (ESG) DEBATE EMERGES FROM THE SOIL OF CLIMATE DENIAL

[Pre-Publication Draft]

53 UNIVERSITY OF MEMPHIS LAW REVIEW (forthcoming)

Lawrence J. Trautman*
Neal F. Newman**

* BA, The American University; MBA, The George Washington University; J.D., Oklahoma City University School of Law. Mr. Trautman is Associate Professor of Business Law and Ethics at Prairie View A&M University, and past-president of the New York and Washington/Baltimore chapters of the National Association of Corporate Directors (NACD). He may be contacted at [redacted]

** BBA (Accounting) University of Michigan; JD (Banking, Corporate Finance, and Securities Law) Howard University School of Law. Mr. Newman is Professor of Law at Texas A&M University School of Law. He may be contacted at [redacted]

ABSTRACT

It has been almost six decades since Rachel Carson's ominous warning of pending environmental disaster. During 2019 the United Nations requested urgent action from world leaders, given that "just over a decade is all that remains to stop irreversible damage from climate change." With every passing year, damage resulting from destructive climate change causes increased pain, suffering, death and massive property loss. During 2020 and 2021 alone, severe weather events have included: destructive fires in California; record breaking freeze, power outage, and threat to the electrical grid in Texas; continuation of disruptive drought in U.S. Western states; and record-breaking high temperatures in the U.S. Pacific Northwest. Global recognition of threats posed by carbon emissions appear universal. For several years, U.S. intelligence agencies have considered climate change to be a risk to national security. During April 2021, U.S. Defense Secretary Lloyd Austin described climate change as an "existential threat to national security." As one of the first actions taken by the incoming Administration, President Biden observed, "The United States and the world face a profound climate crisis. We have a narrow moment to pursue action at home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents." We believe this discussion of policy issues and recent efforts to address ESG considerations by governmental regulatory agencies adds to this timely dialogue between business, governments and all the peoples of the world. The time for delay has passed.

Keywords: BlackRock, carbon dioxide emissions, climate change, corporate governance, disclosure, diversity, economic inequality, Environmental, ESG, externality, EXXON, finance, foreign policy, institutional investment, national security, proxy fight, regulation, risk, SEC, securities, social, sustainability, United Nations

Response to: Vile No. S7-10-22, the Enhancement and Standardization of Climate-Related Disclosure for Investors.

Word Count (including footnotes) = 24,268

CONTENTS

THE ENVIRONMENTAL, SOCIAL, GOVERNANCE (ESG) DEBATE EMERGES FROM THE SOIL OF CLIMATE DENIAL

> *"Our world is in trouble. Societies and economies are still battling the impacts of Covid-19. Extreme poverty and chronic hunger are increasing. The disastrous impacts of climate change are more visible by the day. COP 26 is around the corner and the stakes could not be higher. Without decisive action, we are gambling away our last chance to — literally — turn the tide. We need to end the war on our planet and ensure a green and resilient recovery. This means committing to net-zero emissions by mid-century. More ambitious 2030 climate and biodiversity plans — with concrete action now. No new coal plants. And implementing the $100 billion promise to support developing countries as they shift from fossil fuel-dependent economies to ones based on renewable sources. We need bold and ambitious commitments by all countries…"*
>
> *António Guterres*
> *UN Secretary-General*
> *October 7, 2021*[1]

OVERVIEW

It has been almost six decades since Rachel Carson's ominous warning of pending environmental disaster.[2] During 2019 the United Nations requested urgent action from world leaders, given that "just over a decade is all that remains to stop irreversible damage from climate change."[3] With every passing year, damage resulting from destructive climate change causes increased pain, suffering, death and massive property loss. During 2020 and 2021 alone, severe weather events have included: destructive fires

[1] Press Release, Secretary-General's video message to EU Sustainable Investment Summit, United Nations, (07 Oct. 2021).
[2] RACHEL CARSON, SILENT SPRING, HOUGHTON MIFFLIN CO., (1962).
[3] Press Release, Only 11 Years Left to Prevent Irreversible Damage from Climate Change, Speakers Warn during General Assembly High-Level Meeting, United Nations (Mar. 28, 2019), https://www.un.org/press/en/2019/ga12131.doc.htm (last viewed Jan. 31, 2022).

in California;[4] record breaking freeze, power outage, and threat to the electrical grid in Texas;[5] continuation of disruptive drought in U.S. Western states;[6] destructive tropical storms;[7] and record-breaking high temperatures in the U.S. Pacific Northwest.[8] Global recognition of threats posed by carbon emissions appears universal. For several years, U.S. intelligence agencies have considered climate change to be a risk to national security.[9] During April 2021, U.S. Defense Secretary Lloyd Austin described climate change as an "existential threat to national security."[10] As one of the first actions taken by the incoming Administration, President Biden observed, "The United States and the world face a profound climate crisis. We have a narrow moment to pursue action at

---

4 Talal Ansari, *Fire Crews Make Headway, but Conditions Persist*, WALL ST. J., Oct. 1, 2021 at A3.

5 Rebecca Smith, *Texas Grid Came Close to Bigger Disaster From Freeze*, WALL ST. J., May 28, 2021 at A1 (observing that "the Texas electric grid came within five minutes of a complete collapse in mid-February).

6 *Governor Asks for 15% Drop in Water Usage*, Associated Press, WALL ST. J., July 9, 2021 at A2; Diana Leonard, Laris Karklis & Zach Levitt, *Reservoirs are drying up as consequences of the Western drought worsen*, WASH. POST, July 9, 2021, https://www.washingtonpost.com/weather/2021/07/09/western-reservoirs-drought-california-nevada/?itid=hp-top-table-main (last viewed Jan. 31, 2022).

7 Matthew Cappucci, *Tropical Storm Elsa drenching New England after deluging Mid-Atlantic*, WASH. POST, July 9, 2021, https://www.washingtonpost.com/weather/2021/07/09/tropical-storm-elsa-new-england/?utm_campaign=wp_post_most&utm_medium=email&utm_source=newsletter&wpisrc=nl_most&carta-url=https%3A%2F%2Fs2.washingtonpost.com%2Fcar-ln-tr%2F341c4f9%2F60e86e989d2fda8060fe659b%2F5ecc1e1bae7e8a43605b768e%2F40%2F70%2F60e86e989d2fda8060fe659b (last viewed Jan 31, 2022).

8 Henry Fountain, *Scientists Say Extreme Heat Is a Grim Sign*, N.Y. TIMES, July 8, 2021 at A1.

9 Pentagon, CIA Eye New Threat: Climate Change, NPR (Dec. 14, 2009), https://www.npr.org/templates/story/story.php?storyId=121352495; Implications for U.S. National Security of Anticipated Climate Change, Nat'l Inte'l Council (Sept. 21, 2016), https://www.dni.gov/files/documents/Newsroom/Reports%20and%20Pubs/Implications_for_US_National_Security_of_Anticipated_Climate_Change.pdf (last viewed Jan. 31, 2022).

10 Ellen Mitchell, *Pentagon Chief: Climate Crisis 'Existential' threat to US National Security*, TheHill April 22, 2021, https://thehill.com/policy/defense/549842-pentagon-chief-climate-crisis-existential-threat-to-us-national-security (last viewed Jan. 31, 2022).

home and abroad in order to avoid the most catastrophic impacts of that crisis and to seize the opportunity that tackling climate change presents."[11]

Our paper proceeds in eight parts. First, we discuss ESG and its importance. Second, we look at the compelling need for corporate management and the board to consider the first of the ESG component parts, Environmental. Third, we explore corporate responsibility for addressing social issues. Fourth, we turn our attention to the corporate governance responsibilities facing every board. Fifth, we examine the role of the Securities and Exchange Commission (SEC) in corporate disclosure generally. Sixth is a discussion of the SEC and ESG. Seventh, we cover recent developments, including: the 2021 proxy focus on ESG at Exxon, U.S. political developments impacting this issue, and global concerns and policy toward climate regulation. And last, we conclude. We believe this paper contributes to the corporate governance discussion and understanding of Environmental, Social, and Governance (ESG) issues.

[11] Executive Order on Tackling the Climate Crisis at Home and Abroad (Jan. 27, 2021), https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/ (last viewed Jan. 31, 2022).

I. WHAT IS ESG AND WHY IS IT IMPORTANT?

> *"In the past year, people have seen the mounting physical toll of climate change in fires, droughts, flooding and hurricanes. They have begun to see the direct financial impact as energy companies take billions in climate-related write-downs on stranded assets and regulators focus on climate risk in the global financial system. They are also increasingly focused on the significant economic opportunity that the transition will create, as well as how to execute it in a just and fair manner. No issue ranks higher than climate change on our clients' lists of priorities. They ask us about it nearly every day."*
>
> *Laurence D. Fink*
> *Chief Executive*
> *BlackRock*[12]

In general, the term "ESG" simply stands for "environmental, social, and governance."[13] Within a funds context "such as mutual funds and EFTs [many] that focus on environmental, social, and governance principles (ESG funds) have gained popularity with investors over time."[14] The SEC states:

> ESG investing has grown in popularity in recent years, and may be referred to in many different ways, such as sustainable investing, socially responsible investing, and impact investing. ESG practices can include, but are not limited to, strategies that select companies based on their stated commitment to one or more ESG factors —for example, companies with policies aimed at minimizing their negative impact on the environment or companies that focus on governance principles and transparency. ESG practices may also entail screening out companies in certain sectors or that, in the view of the fund manager, have shown poor performance with regard to management of ESG risks and opportunities. Furthermore, some fund managers may focus on companies that they view as having room for

[12] Laurence D. Fink, Larry Fink's 2021 Letter to CEOs, https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-letter (last viewed Jan. 31, 2022) (BlackRock has $8.7 trillion of assets under management).
[13] Environmental, Social and Governance (ESG) Funds – Investor Bulletin, U.S. Securities and Exchange Commission, Investor.gov (Feb. 26, 2021), https://www.investor.gov/introduction-investing/general-resources/news-alerts/alerts-bulletins/investor-bulletins-1 (last viewed Jan. 31, 2022).
[14] *Id.*

improvement on ESG matters, with a view to helping those companies improve through actively engaging with the companies.[15]

Again within a mutual funds context, some investment related terms or "factors are not defined in federal securities laws, may be subjective, and may be defined in different ways by different funds or sponsors. There is no SEC "rating" or "score" of E, S, and G that can be applied across a broad range of companies..."[16] Investors should be aware that, "Some funds may focus on ESG investing, while others consider ESG factors alongside other more traditional factors. Different funds may weigh [ESG] factors differently. For Example, some ESG funds may invest in companies that have strong governance policies, but may not have the [desired] environmental or social impact…"[17] Consider that the term "ESG" may relate as follows:

- The *environmental* component might focus on a company's impact on the environment—for example, its energy use or pollution output. It also might focus on the risks and opportunities associated with the impacts of climate change on the company, its business and its industry.
- The *social* component might focus on the company's relationship with people and society—for example, issues that impact diversity and inclusion, human rights, specific faith-based issues, the health and safety of employees, customers, and consumers locally and/or globally, or whether the company invests in its community, as well as how such issues are addressed by other companies in a supply chain.
- The *governance* component might focus on issues such as how the company is run—for example, transparency and reporting, ethics, compliance, shareholder rights, and the composition and role of the board of directors.[18]

Investor Support for ESG

SEC Commissioner Allison Herren Lee states, "ESG investing is no longer just a matter of personal choice. Asset managers responsible for trillions in investments,

[15] *Id.*
[16] *Id.*
[17] *Id.*
[18] *Id.*

issuers, lenders, credit rating agencies, analysts, index providers, stock exchanges—nearly all types of market participants—use ESG as a significant driver in decision-making, capital allocation, pricing, and value assessments."[19] By simply following the money investment flows we learn:

> At the end of 2019, about $17.1 trillion — roughly one third of all assets under professional management in the U.S. — was being managed using some type of sustainable-investment strategy or by institutions that filed share-holder resolutions on ESG issues, according to the most recent data from the US SIF Foundation, a sustainable investing trade group. That was a 42% increase from two years earlier, the group said.
>
> In the first quarter of [2021], meanwhile, a net $21.5 billion flowed into mutual funds and exchange-traded funds that use ESG screens or some other type of sustainable-investing approach, a record amount and almost double the net inflows in the year-earlier quarter, according to a report from Morningstar Inc…
>
> For years, there has been a subset of investors focused on ESG, and companies that have quietly made such issues a priority, says John Streur, president and CEO of Calvert Research and Management, an investment-management firm that specializes in responsible and sustainable investing across global capital markets. Now, more investors and companies are getting on board, he says, as a growing body of research suggests that focusing on material ESG issues can drive better financial performance.[20]

In his 2022 Letter to CEOs, investment giant BlackRock's Chief Executive Larry Fink states, "It's been two years since I wrote that climate risk is investment risk. And in that short period, we have seen a tectonic shift of capital. Sustainable investments have now reached $4 trillion. Actions and ambitions towards decarbonization have also increased."[21] Mr. Fink observes, "This is just the beginning — the tectonic shift towards sustainable investing is still accelerating."[22] Consider:

[19] Regulation S-K and SEC Disclosures: An Unsustainable Silence, Statement by Allison Herren Lee, Commissioner (Aug. 26, 2020), https://www.sec.gov/news/public-statement/lee-regulation-s-k-2020-08-26 (last viewed Jan. 31, 2022).

[20] Cheryl Winokur Munk, *The New Math of Socially Responsible Investing*, ESG Journal Rept., WALL ST. J., June 28, 2021 at R1.

[21] Larry Fink's 2022 Letter to CEOs: The Power of Capitalism, BlackRock (2022), https://www.blackrock.com/corporate/investor-relations/larry-fink-ceo-

Whether it is capital being deployed into new ventures focused on energy innovation, or capital transferring from traditional indexes into more customized portfolios and products, we will see more money in motion…

The next 1,000 unicorns won't be search engines or social media companies, they'll be sustainable, scalable innovators – startups that help the world decarbonize and make the energy transition affordable for all consumers. We need to be honest about the fact that green products often come at a higher cost today. Bringing down this green premium will be essential for an orderly and just transition. With the unprecedented amount of capital looking for new ideas, incumbents need to be clear about their pathway succeeding in a net zero economy. And it's not just startups that can and will disrupt industries. Bold incumbents can and must do it too. Indeed, many incumbents have an advantage in capital, market knowledge, and technical expertise on the global scale required for the disruption ahead.[23]

letter?cid=ppc:blk:ll:na:ol:goog:na:v2:bhv:tl&gclid=CjwKCAiA866PBhAYEiwANkIneHg-4EvBeHklrZ_TbR9WYUM7uqWjY05GvdwTR4cPAcra38-uUl337hoCjv4QAvD_BwE&gclsrc=aw.ds.

[22] *Id.*

[23] *Id. See also* Andrew Ross Sorkin & Michael J. de la Merced, *It's Not 'Woke' to Think Beyond Profit, Chief of BlackRock Says,* N.Y. TIMES, Jan. 19, 2022 at B5.

II. ENVIRONMENTAL

> *"Today, no nation can find lasting security without addressing the climate crisis. We face all kinds of threats in our line of work, but few of them truly deserve to be called existential. The climate crisis does… climate change is making the world more unsafe and we need to act… The climate crisis is a profoundly destabilizing force for the world… As the Arctic ice melts, competition for resources and influence in the region increases. Closer to the equator, rising temperatures and more frequent and intense extreme weather events in Africa and Central America threaten millions with drought, hunger and displacement."*
>
> *Lloyd Austin*
> *U.S. Secretary of Defense*
> *April 22, 2021*[24]

The Climate Threat

Climate disruptions have now risen to become a global threat to the health, political stability, food security, and economic wellbeing of all humanity. As a threshold matter, to facilitate our discussion about environmental issues a few definitions are helpful. First, "According to the National Oceanic and Atmospheric Administration, *weather* reflects short-term conditions of the atmosphere in a particular region while *climate* encompasses the averages, variability, and other statistics of weather over longer periods of time."[25] Next, "*Weather* includes very hot or cold or rainy days, while *extreme weather* events include extended droughts, floods, heatwaves, cold waves, and intense tropical storms. *Climate change* reflects nonrandom change in climate measured over

[24] David Vergun, *Defense Secretary Calls Climate Change an Existential Threat*, DOD NEWS (Apr. 22, 2021), https://www.defense.gov/Explore/News/Article/Article/2582051/defense-secretary-calls-climate-change-an-existential-threat/ (last viewed Jan. 31, 2022).

[25] Implications for U.S. National Security of Anticipated Climate Change, *supra* note 9. *See also* Sarah E. Light, *Valuing National Security: Climate Change, the Military, and Society*, 61 UCLA L. Rev. 1772 (2014); Sarah E. Light, *The Military-Environmental Complex,* 55 B.C. L. REV. 879 (2014).

several decades or longer."[26] Last, *"Climate variability* reflects the way that climate fluctuates above or below long-term average values."[27] On June 1, 2021, *The New York Times* reports, "More than a third of heat-related deaths in many parts of the world can be attributed to the extra warming associated with climate change, according to a new study that makes a case for taking strong action to reduce greenhouse gas emissions in order to protect public health."[28] Journalist John Schwartz observes that the results derive from:

> [Seventy] researchers using data from major projects in the fields of epidemiology and climate modeling in 43 countries. It found that heat-related deaths in warm seasons were boosted by climate change by an average of 37 percent, in a range of a 20 percent increase to 76 percent… Climate change has added to overall mortality from all causes by as much as 5 percent in some parts of the world, the authors found; they detected increased mortality from climate boosted heat on every inhabited continent.
>
> While the differences in mortality among the places studied are complex and spring from varied factors that include access to health care as well as architecture, urban density and lifestyle, the research indirectly suggests a divide between rich and poor regions. North America and East Asia, the researchers found, tended toward a smaller proportion of climate-related deaths; some Central and South American nations saw a greater than 70 percent proportion of heat deaths attributable to warming.
>
> The new paper comes amid a rush of recent research on heat stress and economic inequality, both in the United States and across the globe. While people around the world are increasingly reliant on air conditioning, which could be holding down death rates while contributing to the emissions that heat the planet, climate change is also disrupting power grids, with failures increasing by 60 percent since 2015 in the United States alone. That means that the crutch of air conditioning could become less reliable over time…
>
> Because the scientists were unable to gather reliable data in some parts of the world, including parts of Africa and South Asia, Dr. Vicedo-Cabrera was reluctant to say that the mortality average the researchers found could be applied worldwide… The author of the commentary, Dann Mitchell, a climate scientist at the University of Bristol, said in an interview that the increased burden of climate change-boosted heat waves on societies like India, where many people already live in crowded

[26] *Id.*
[27] *Id.*
[28] John Schwartz, *Study Ties Over 1/3 of Heat Deaths to Climate Change*, N.Y. TIMES (Int'l Sec), June 1, 2021 at A11.

> conditions and poverty, and where health services are already strained, could create 'something that's not sustainable.'[29]

Global temperatures continue to rise, as "extreme heat has killed at least 166,000 people worldwide over the past two decades, according to the World Health Organization. In the U.S., more than 1,000 people died during a 1995 heat wave in the Midwest, including 465 in Chicago. A 2003 heat wave killed more than 70,000… Europe[ans]."[30] Another example in the seemingly endless list of deteriorating climate dynamics, *The New York Times* states, "Global warming is likely to make India's monsoon season wetter and more dangerous, new research suggests."[31] Negatively impacting many of the least fortunate among us:

> Scientists have known for years that climate change is disrupting monsoon season. Past research based on computer models has suggested that the global heating caused by greenhouse gases, and the increased moisture in the warmed atmosphere, will result in rainier summer monsoon seasons and unpredictable, extreme rainfall events…
>
> Now that human activity is boosting levels of atmospheric greenhouse gases, the research suggests, we can expect to see the same monsoon patterns emerge. Steven Clemens, a professor of earth, environmental and planetary sciences at Brown University and lead author of the study, said 'we can verify over the past million years increases in carbon dioxide in the atmosphere have been followed by substantial increases in rainfall in the South Asian monsoon system.'[32]

---

[29] *Id.*

[30] Orla McCaffrey, Ian Lovett & Paul Vieira, *Health System Wilted in Heat,* WALL ST. J., July 6, 2021 at A6.

[31] John Schwartz, *A Million Years of Data Shows Monsoons Are Likely to Get Worse,* N.Y. TIMES, June 5, 2021 at A9.

[32] *Id. See also* Brian Berkey & Eric W. Orts, *The Climate Impoerative for Business*, 64 CAL. MGMT. REV. (2022), https://cmr.berkeley.edu/assets/documents/pdf/2021-04-climate-imperative.pdf; Sarah E. Light & Eric W. Orts, *Parallels in Public and Private Environmental Governance,* 5 MICH. J. ENV'T. & ADM. L. 1 (2015); Sarah E. Light, *The Law of the Corporation as Environmental Law*, 71. STAN. L. REV. 137 (2019); Sarah E. Light & Christina P. Skinner, *Banks and Climate Governance*, 121 COLUM. L. REV. 1895 (2021); Eric W. Orts, Orts, Eric Wills, Climate Contracts, 29 VA. ENVL. L. J. 197 (2011), https://ssrn.com/abstract=1814504

Change Aggregate Climate Behavior or Die

Laurence D. Fink, Chairman and Chief Executive Officer of leading fund investment manager BlackRock depicts a worrisome trajectory for humanities' struggle with carbon emissions and climate change. Writing in his 2021 letter to CEO's, Chairman Fink observes, "The economy today remains highly dependent on fossil fuels, as is reflected in the carbon intensity of large indexes like the S&P 500 or the MSCI World, which are currently on trajectories substantially over 3°C."[33] As we will discuss at length later, this means irreversible premature death, disease, food insecurity, and severe recurring property loss due to volatile weather within decades.[34] Mr. Fink warns:

> That means a successful transition — one that is just, equitable, and protects people's livelihoods — will require both technological innovation and planning over decades. And it can only be accomplished with leadership, coordination, and support at every level of government, working in partnership with the private sector to maximize prosperity. Vulnerable communities and developing nations, many of them already exposed to the worst physical impacts of climate change, can least afford the economic shocks of a poorly implemented transition. We must implement in a way that delivers the urgent change that is needed without worsening this dual burden.[35]

Climate change and ESG issues are no longer solely an academic exercise and idle conjecture about alternative futures. ESG, carbon emissions, and global warming has now become a life and death issue. For humanity, the scientific evidence suggests we must change quickly or die. Word count restrictions for any single law review article prohibits our ability to adequately cover the numerous ways in which our planet is in ecological crisis. Recent history depicts a world consumed with issues of global pandemic and widespread social hostility and division. To a considerable extent, the

---

[33] *See* Fink, *supra* note 12.
[34] *See Infra* § II.
[35] *See* Fink, *supra* note 12.

immediate life-threatening focus toward dealing with Covid-19 issues has diverted the world's attention away from the impending climate debacle. How the, can we effectively rise to the challenge of discussing the multitude of environmental crises confronting humankind in such a limited number of words? We have chosen in the following pages to illustrate the immediate urgency of our plight by simply discussing events that transpired during the first ten days of July 2021 alone: destructive fires in California;[36] electrical power insecurity;[37] continuation of disruptive drought in U.S. Western states;[38] tropical storm destruction;[39] and record-breaking high temperatures in the U.S. Pacific Northwest.[40]

Destructive California Fires

During October 2021, *The Wall Street Journal* reports, "There are 10 large fires burning in California. The major fires in the Golden State are part of 60 large fires across the U.S. that have burned more than 3.1 million acres — on par with other fire seasons in recent years."[41] For example, "A wind-driven wildfire has scorched thousands of acres near Santa Barbara, Calif., and prompted officials to issue evacuation orders and close part of the 101 Freeway."[42] Los Padres National Forest public information officer Andrew Madsen states, "The fire is doing things that a few years ago we would've

---

[36] *See* e.g. Talal Ansari, *supra* note 4.
[37] Rebecca Smith, *Texas Grid Came Close to Bigger Disaster From Freeze*, WALL ST. J., May 28, 2021 at A1 (observing that "the Texas electric grid came within five minutes of a complete collapse in mid-February).
[38] *Governor Asks for 15% Drop in Water Usage,* Associated Press, WALL ST. J., July 9, 2021 at A2; Diana Leonard, Laris Karklis & Zach Levitt, *Reservoirs are drying up as consequences of the Western drought worsen*, WASH. POST, July 9, 2021, https://www.washingtonpost.com/weather/2021/07/09/western-reservoirs-drought-california-nevada/?itid=hp-top-table-main (last viewed Jan. 31, 2022).
[39] *See* Cappucci, *supra* note 7.
[40] Henry Fountain, *Scientists Say Extreme Heat Is a Grim Sign,* N.Y. TIMES, July 8, 2021 at A1.
[41] *See* Talal Ansari, *supra* note 4.
[42] Jennifer Calfas, *Fire Shuts Part of Coastal Highway,* WALL ST. J., Oct. 13, 2021 at A3.

thought was unheard of. But now it's almost becoming a routine observance… If it's got the fuels and if it's got some wind… it can just go nuts and it can move in all different directions."[43] By 2022, *The New York Times* observes, "'Generally speaking, we are in an era of amplified extreme events in terms of cost, frequency and diversity,' said Adam Smith, a climatologist at the National Oceanic and Atmospheric Administration."[44] During winter 2022, "Alta Sierra, 60 miles northeast of Sacramento, generally gets a few inches of snow each winter. But on December 27 snow piled up to 3 feet high and knocked an estimated 2,000 trees onto power lines, causing blackouts for some 200,000 customers of PG&E Corp. across four counties."[45]

Following a year of destructive California wildfires, the Biden Administration "announced a 10-year, multibillion-dollar plan to reduce the fire risk on up to 50 million acres that border vulnerable communities."[46] During early 2022, *The New York Times* writes:

> The federal Agricultural Department said in a statement that it would take measures to reduce the danger of catastrophic fires in dozens of spots in 11 Western states by thinning overgrown trees and using controlled burns to get rid of dead vegetation… In the past decade, the number of fires each year in the West has remained fairly constant. What has changed is their scale.
>
> The 2021 fire season included several extremely large fires. The Bootleg fire, which burned more than 400,000 acres in Oregon, was among the largest in the state's history. In Northern California, the Dixie fire burned through nearly one million acres to become the second largest in state history.
>
> In addition to California and Oregon, the agency plans to take the preventive measures on land in Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, South Dakota, Utah and Washington.[47]

---

[43] Jennifer Calfas, *California Fire Grows, Prompting New Warnings*, WALL ST. J., Oct. 14, 2021 at A3.
[44] Jim Carlton, *Latest Extreme Weather Tests Rural California,* WALL ST. J., Jan. 18, 2022 at A3.
[45] *Id.*
[46] Alyssa Lukpat, *Plan to Prevent Wildfires In West Will Cost Billions,* N.Y. TIMES, Jan. 20, 2022 at A17.
[47] *Id.*

Electrical Power Insecurity

Also during the first ten days of July 2021, the California "agency that runs the state electrical grid asked residents on Thursday to set their thermostats at 78 degrees or higher to reduce power usage, and governor Gavin Newsom expanded a regional drought emergency to cover all but eight of the state's 58 counties."[48] The California governor also asked state residents to reduce water consumption by 15 percent, while Oregon governor Kate Brown "directed Oregon OSHA to adopt emergency rules before the incoming heat wave, including requirement for employers to provide workers with shade, rest time and cool water during extreme heat events."[49]

Drought in U.S. Western States

By Fall 2021, "Drought across large parts of the West [U.S.] has dried out vegetation and larger sources of fuel such as branches and downed trees, making them more easily combustible."[50] Also during 2021, "The severity of this fire season has differed across regions of the country, and California is in the middle of an above-average fire season, with some of the most active months still ahead."[51] During mid-October 2021, "The Alisal Fire is one of dozens of large fires burning 2.8 million acres in nine states, with the majority of blazes in Idaho, California and Montana, according to the National Interagency Fire Center."[52] During late 2021, *The Wall Street Journal* reports. "Developers trying to build more housing in fast-growing cities in the West are running into… opposition. Worries about wildfire evacuation intensified after the Camp Fire

[48] Sergio Olmos & Shawn Hubler, *Heat Warnings and Worries About Workers as the West Swelters Again*, N.Y. TIMES, July 10, 2021 at A10.
[49] *Id.*
[50] *See* Talal Ansari, *supra* note 3.
[51] *Id.*
[52] Jennifer Calfas, *supra* note 43.

destroyed Paradise, Calif., in 2018, killing 85 people — including some found in charred vehicles."[53]

Tropical Storm Destruction

An increased prevalence of destructive tropical storms are "filled with heavy rain, flooding, strong winds, and tornadoes."[54] Just one example is found in the July 2021 tropical storm "punctuated by excessive rainfall that grounded the evening commute in the Big Apple to a halt. Severe thunderstorms blossomed in advance of [Tropical Storm] Elsa along a stalled front… Hail the size of tennis balls fell in Bergen County, N.J., where 4.92 inches of rain [fell within 24 hours]."[55]

The July 8, 2021 "storms flooded parts of New York City's vast subway system… they stranded some rush-hour commuters and underscored just how vulnerable the city's underground transportation lifeline is to water."[56] *The New York Times* cautions:

> But now, the subway's water woes are likely to get worse as more extreme rains become increasingly common with the changing climate.
>
> The Metropolitan Transportation Authority, which operates the 472-station subway, has spent $130 million to address water issues as part of a 2017 subway action plan, including cleaning and repairing 40,000 street and side-walk vents that allow water to run down into the subway, and clearing drainage pipes under tracks and inside stations that carry rainwater to pumps.
>
> The agency has also invested $2.6 billion in resiliency projects since Hurricane Sandy swamped the system in 2012, including fortifying 3,500 subway openings and vents, staircases and elevator shafts against flooding primarily in low-lying and coastal areas. The M.T.A. also spends an average of $20 million annually on water-mitigation efforts such as replacing pumps and upgrading pump rooms…

---

[53] Jim Carlton, *Fire Evacuation Fears Crimp Housing Development in West*, WALL ST. J., Oct. 20, 2021 at A3.
[54] *See* Cappucci, *supra* note 7.
[55] *Id.*
[56] Winnie Hu & Anne Barnard, *Flood in New York's Subway Points to Problems of Future*, N.Y. TIMES, July 10, 2021 at A14.

> 'Millions of New Yorkers depend on a reliable subway trip every single day no matter the weather,' said Danny Pearlstein, a spokesman for the Riders Alliance, an advocacy group. 'Fording a river should not be a part of a New York commute.'
>
> The [July 8, 2021] rains did not just disrupt the subway; they also clogged highways, flooded residential streets and poured into basements. New York's aging infrastructure, including its subway system, was neve5r built to withstand so much water in such a short period of time.
>
> As a growing number of scientific studies has shown, New York and the surrounding region is already experiencing heavier downpours and hotter temperatures as a result of planetary warming.
>
> That will present growing challenges, not just in the form of mega storms like Sandy but also with more-frequent sudden torrential downpours, which overwhelm drainage systems that — even if they were not outdated and in need of maintenance and upgrades — were built for a climate of the past…[57]

Just a few months later, *The New York Times* reports, "California bore the brunt of what meteorologists referred to as a 'bomb cyclone' and… 'atmospheric river,' a convergence of storms that brought more than half a foot of rain to parts of the Bay area, along with high winds, concerns about flash floods and the potential for heavy snow."[58]

Geophysicist Klaus Jacob at Columbia University's Earth Institute conducted research regarding the New York City subway system before Hurricane Sandy and "predicted much of the flooding that has since unfolded. His studies modeling future floods have found that the upgrades are effective but need more backup measures, because, he says breaches at just a few weak points could lead to widespread flooding and malfunctions."[59] However, these "measures might not be enough. A panel tasked with studying the impact of climate change on the city projected that the seas around the city will rise between 1.25 and 9.5 feet by 2100, forcing the relocation of entire

---

[57] *Id.*
[58] Neil Vigdor & Alyssa Lukpat, *2 Unusual Storms Converge And Pummel California Coast,* N.Y. TIMES, Oct. 25, 2021 at A18.
[59] Hu & Barnard, *supra* note 56.

neighborhoods and modification of transit routes."[60] By early 2022, the mid-Atlantic and Northeast United States was hit with a major winter storm, "knocking out power… for more than 200,000 homes and businesses. The effects of the storm, known as Winter Storm Izzy, were felt from Georgia to parts of Canada. Asheville, N.C., got 10 inches of snow and broke the snowfall record that was previously set in 1891."[61]

<u>Record-Breaking High Temperatures in the U.S. Pacific Northwest</u>

The Wall Street Journal reports, "At least 118 people died in the record heat wave that engulfed the Pacific Northwest in late June [2021], when Portland and Seattle hit record highs of 116 degrees and 108, respectively. Lytton, a village in British Columbia, reached 121 degrees. A wildfire destroyed most of its homes…"[62] These temperatures were so excessive, that:

> Researchers had difficulty saying just how rare the heat wave was. But they estimated that in any given year there was only a 0.1 percent chance of such an intense heat wave occurring.
>
> 'Although it was a rare event, it would have been virtually impossible without climate change,' said Geert Jan van Oldenborgh of the Royal Netherlands Meteorological Institute, who conducted the study with 26 other scientists, part of a collaborative group called World Weather Attribution.
>
> If the world warms another 1.5 degrees Fahrenheit, which could occur this century barring drastic cuts in greenhouse-gas emissions, similar events would not be so rare, the researchers found. The chances of such a severe heat wave occurring somewhere in the world would increase to as much as 20 percent in a given year. 'For heat waves, climate change is an absolute game changer,' said Friederike Otto, of Oxford University in England, one of the researchers.
>
> Alexander Gershunov, a research meteorologist at the Scripps Institution of Oceanography in San Diego, said the findings were in keeping with what is known about the effects of global warming on heat waves…

[60] *Id.*
[61] Michael Wright, *Storm Pounds the East, Sets a Record,* WALL ST. J., Jan. 18, 2022 at A3.
[62] Orla McCaffrey, Ian Lovett & Paul Vieira, *Health System Wilted in Heat,* WALL ST. J., July 6, 2021 at A6.

> Temperature records for cities and towns in the [Pacific Northwest] region were broken, and by a much larger margin than the researchers had ever seen in a heat wave. Given that, they also raised the possibility that the world was witnessing a change in how the warming climate behaved.[63]

Just days later, "Western states braced for another extreme spike in temperatures this weekend after a recent heat wave in Oregon and Washington State killed nearly 200 people and endangered laborers in fields and warehouses."[64] Continuation of elevated "heat warnings were in effect across inland California and in the Southwest through the weekend, and the National Weather Service predicted that temperatures would approach an all-time high by Saturday… at least 130 degrees… one of the highest temperatures reliably recorded on Earth — was forecast for Death Valley."[65]

And now, for a truly sobering assessment of this week's climate disaster, where "dead mussels and clams coated rocks in the Pacific Northwest, their shells gaping open as if they'd been boiled. Sockeye salmon swam sluggishly in an overheated Washington river, prompting wildlife officials to truck them to cooler areas."[66] For the Pacific Northwest, "The combination of extraordinary heat and drought… over the past two weeks has killed hundreds of millions of marine animals and continues to threaten untold species in fresh-water, according to a preliminary estimate and interviews with scientists."[67] *The New York Times* reports:

> 'It just feels like one of those postapocalyptic movies,' said Christopher Harley, a marine biologist at the University of British Columbia who studies the effects of climate change on coastal marine ecosystems…

[63] Henry Fountain, *Scientists Say Extreme Heat is a Grim Sign*, N.Y. TIMES, July 8, 2021 at A1.
[64] Sergio Olmos & Shawn Hubler, *Heat Warnings and Worries About Workers as the West Swelters Again*, N.Y. TIMES, July 10, 2021 at A10.
[65] *Id.*
[66] Catrin Einhorn, *Water Gives Little Shelter As Tide Pools Turn to Stew*, N.Y. TIMES, July 10, 2021 at A10.
[67] *Id.*

> Such extreme weather conditions will become more frequent and intense, scientists say, as climate change, driven by humans burning fossil fuels, wreaks havoc on animals and humans alike… A study by an international team of climate researchers found it would have been virtually impossible for such extremes to occur without global warming.
>
> Just before the heat wave, when Dr. Harley took in the eye-popping weather forecasts, he thought about how low the tide would be at midday, baking the exposed mussels, sea stars and barnacles. When he walked to the beach last week on one of the hottest days, the smell of decay struck him immediately. The scientist in him was excited, he admitted, to see the real-life effect of something he'd been studying for so long.
>
> But his mood quickly changed. 'The more I walked and the more I saw, the more sobering it all became,' Dr. Harley said. 'It just went on and on and on.' The dead sea stars, usually the most eye-catching creatures in tidal pools, hit him particularly hard. But the obvious mass victims were blue mussels, an ecologically important species that feeds sea stars and sea ducks and creates habitat for other animals.
>
> Scientists have only begun to consider the domino effects. One concern is whether the sea ducks, which feast on mussels in the winter before migrating to their summer breeding grounds in the Arctic, will have enough food to survive the journey…[68]

Retired fisheries biologist Don Chapman, considered an expert in steelhead trout and salmon says "We are already at critical temperatures three weeks before the most serious heating occurs… [and considering] conditions along the Snake River in Washington, where four dams are the subject of longstanding controversy… 'I think we are headed for disaster.'"[69]

Shifting the Costs of Bad Behavior to Others

The challenges of reducing carbon emissions and other offenders to the environment is complex. It will likely come as a surprise to none that vested economic interests are reluctant to incur expenses that they can successfully shift to others. Economists refer to these avoided costs as "externalities," where "the indirect effects

[68] *Id.*
[69] *Id.*

have an impact on the consumption and production opportunities of others, but the price of the product does not take those externalities into account."[70] The International Monetary Fund (IMF) observes, "In the case of pollution — the traditional example of a negative externality — a polluter makes decisions based only on the direct cost of and profit opportunity from production and does not consider the indirect costs to those harmed by the pollution."[71] The IMF reports:

> Today, the most pressing and complex externality problem is greenhouse gas (GHG) emissions. The atmospheric accumulation of greenhouse gases from human activity has been identified as a major cause of global warming. Barring policies to curb GHG emissions, scientists expect this problem to grow and eventually lead to climate change and its accompanying costs, including damage to economic activity from the destruction of capital (for example, along coastal areas and lower agricultural activity. Externalities come into play, because the costs and risks from climate change are borne by the world at large, whereas there are few mechanisms to compel those who benefit from GHG-emitting activity to internalize these costs and risks.
>
> The atmosphere, in fact, is a global public good, with benefits that accrue to all, making private bargaining solutions unfeasible. Identifying and agreeing on policies for internalization of the social costs of GHG emissions at the global level are extremely difficult, given the cost to some individuals and firms and the difficulty of global enforcement of such policies. (Tirole, 2008).
>
> Externalities pose fundamental economic policy problems when individuals, households, and firms do not internalize the indirect costs of or the benefits from their economic transactions. The resulting wedges between social and private costs or returns lead to inefficient market outcomes. In some circumstances, they may prevent markets from emerging. Although there is room for market-based corrective solutions, government intervention is often required to ensure that benefits and costs are fully internalized.[72]

As just one example that can probably be attributed to many corporate and nation state actors, *The New York Times* reports on June 4, 2021 that:

---

[70] Thomas Helbling, *Externalties: Prices Do Not Capture All Costs*, Int'l Monetary Fund (Feb. 24, 2020), https://www.imf.org/external/pubs/ft/fandd/basics/external.htm (last viewed Jan. 31, 2022).
[71] *Id.*
[72] *Id.*

> During a divisive meeting over proposed climate regulations last fall, a Saudi diplomat to the International Maritime Organization activated his microphone for an unusually sharp complaint: One of his colleagues was discussing the proceeds online as they happened.
>
> It was a breach of the secrecy at the heart of the I.M.O., a powerful, clubby United Nations agency on the banks of the Thames. Delegates have met for decades behind closed doors to regulate the often-obscure world of international shipping. Today, that secrecy helps conceal how the organization defeats attempts to reduce emissions in an industry that produces as much carbon dioxide as all of America's coal plants combined.
>
> But internal documents, recordings and dozens of interviews show that the organization has repeatedly delayed and watered down climate regulations for an industry that burns some of the dirtiest fuel available — an oil so thick it might otherwise be turned into asphalt. That inaction has allowed shipping emissions to rise, a trend that threatens to undermine the goals of the 2016 Paris climate accord.
>
> One reason for the lack of progress is that the I.M.O. is a regulatory body that is run in concert with the industry it regulates. Shipbuilders, oilmen, miners, chemical manufacturers and others with huge financial stakes in commercial shipping are among the delegates appointed by many member nations. They sometimes even speak on behalf of governments, knowing that public records are sparce, and that even when the organization allows journalists into its meetings, it typically prohibits them from quoting people by name.[73]

United Nations Warnings

During her opening remarks to the 2019 meeting of the United Nations, General Assembly President María Fernanda Espinosa Garcés of Ecuador warned the delegates, 'We are the last generation that can prevent irreparable damage to our planet'… stressing that 11 years are all that remain to avert catastrophe. Highlighting the meeting's theme, Ms. Espinosa called for an intergenerational approach to climate change. 'Climate justice is intergenerational justice."[74] Numerous delegates presented remarks and expressed continuing concern for the plight of our planet. As just one example of many similar

[73] Matt Apuzzo & Sarah Hurtes, *Industry Ducks Efforts to Set Climate Rules: Global Shipping Finds Ways Not to Change*, N.Y. TIMES, June 4, 2021 at A1.

[74] Press Release, Only 11 Years Left to Prevent Irreversible Damage from Climate Change, Speakers Warn during General Assembly High-Level Meeting, United Nations (Mar. 28, 2019), https://www.un.org/press/en/2019/ga12131.doc.htm (last viewed Jan. 31, 2022).

comments, Petteri Taalas, World Meteorological Organization (WMO) Secretary-General:

> noted the recent Cyclone Idai in Mozambique, Malawai and Zimbabwe, oceans warming by half a degree, and the most expensive hurricane season in Caribbean history, all of which demonstrate a worsening situation demanding action. He highlighted that the past four years have been the warmest in history and greenhouse gases have increased by 2.7 per cent. Meanwhile, only 15 per cent of global energy is sourced from nuclear, hydro and renewable power. Without concrete action, the planet will continue to get warmer. Turning to population growth, he said Africa may have 4 billion inhabitants by the end of the century. Echoing other speakers, he called for more involvement by young people.[75]

Postponed once due to the COVID-19 pandemic, the 26th session of the Conference of the Parties (COP 26) to the UN Climate Change Conference (UNFCCC COP 26) was held in Glasgow, Scotland on November 1-12, 2021.[76] In an atmosphere painfully aware that time for mitigation is rapidly running out, *The New York Times* writes that the U.N. Climate Conference, "agreement established a clear consensus that all nations need to do much more, immediately, to prevent a catastrophic rise in global temperatures."[77] Specific steps were outlined that "the world should take, from slashing global carbon dioxide emissions nearly in half by 2030 to curbing emissions of methane, another potent greenhouse gas. And it sets up new rules to hold countries accountable for the progress they make — or fail to make."[78] Of great concern, "The final agreement leaves unresolved the crucial question of how much and how quickly each nation should cut its emissions over the next decade."[79] Not surprisingly, "One of the biggest fights at

---

[75] *Id.*
[76] UN Climate Change Conference (UNFCCC COP 26), SDG Knowledge Hub, IISD, https://sdg.iisd.org/events/2020-un-climate-change-conference-unfccc-cop-26/ (last viewed Jan. 31, 2022).
[77] *6 takeaways from the U.N. Climate Conference*, N.Y. TIMES, Nov. 13, 2021, https://www.nytimes.com/2021/11/13/climate/cop26-climate-summit-takeaways.html.
[78] *Id.*
[79] *Id.*

the summit in Glasgow revolved around whether — and how — the world's wealthiest nations, which are disproportionately responsible for global warming to date, should compensate poorer nations for the damages caused by rising temperatures."[80]

U.S. Intelligence Community Threat Assessment

The United States Intelligence Community consists of many agencies devoted to real world understanding and analysis of facts that impact on U.S. national security and global stability. Accordingly, this large group of analysts represents a well-funded and highly knowledgeable mechanism to render judgments about issues impacting climate change. *The New York Times* reports, "Intelligence officials in the Biden administration came into office pledging to work on areas traditionally dominated by science, like studying the national security implications of climate change and future pandemics."[81] Director of National Intelligence, Avril D. Haine's "office has been more aggressively questioning its science and technology expert group, a collection of some 500 scientists who volunteer to help intelligence agencies answer scientific problems."[82] Accordingly, "Officials have asked those scientists about how coronaviruses mutate as well as about climate change and the availability of natural resources. While the scientists in the expert group do not perform intelligence analysis, their answers can help such analysts inside agencies draw more accurate conclusions, intelligence officials said."[83] Exhibit 1 shows a description produced during 2016 by the U.S. National Intelligence Council and should cause grave concern among thoughtful readers everywhere.

---

80 *Id.*
81 Julian E. Barnes, *U.S. Intelligence Agencies Turn to Scientists for Help,* N.Y. TIMES, July 9, 2021 at A12.
82 *Id.*
83 *Id.*

Exhibit 1

Implications for U.S. National Security of Anticipated Climate Change

Key Points

Long-term changes in climate will produce more extreme weather events and put greater stress on critical Earth systems like oceans, freshwater, and biodiversity. These in turn will almost certainly have significant effects, both direct and indirect, across social, economic, political, and security realms during the next 20 years. These effects will be all the more pronounced as people continue to concentrate in climate-vulnerable locations, such as coastal areas, water-stressed regions, and ever-growing cities.

Effects of Climate Change on National Security: Possible Pathways

Climate change and its resulting effects are likely to pose wide-ranging national security challenges for the United States and other countries over the next 20 years through the following pathways:

- Threats to the stability of countries.
- Heightened social and political tensions.
- Adverse effects on food prices and availability.
- Increased risks to human health.
- Negative impacts on investments and economic competitiveness.
- Potential climate discontinuities and secondary surprises.

Effects of Climate Change on National Security: Possible Timeframes

The complexity of the climate, the uncertainties of modeling, and human choices make it difficult to project when and where specific severe weather events and other effects will affect national security most significantly. However, climate models do not diverge significantly on their estimates of future surface temperatures or on changes in other climate variables during the next 20 years, particularly when fluctuations in the climate system are considered…

- Over the next 20 years, in addition to increasingly disruptive extreme weather events, the projected effects of climate change will play out in the combination of multiple weather disturbances with broader, systemic changes, including the effects of sea level rise.[84]

The U.S. National Intelligence Council memorandum highlights their warning that "Climate change is projected to produce more intense and frequent extreme weather events, multiple weather disturbances, along with broader climatological effects, such as

[84] Implications for U.S. National Security of Anticipated Climate Change, *supra* note 9.

sea level rise. These are almost certain to have significant direct and indirect social, economic, political, and security implications during the next 20 years."[85] Consider:

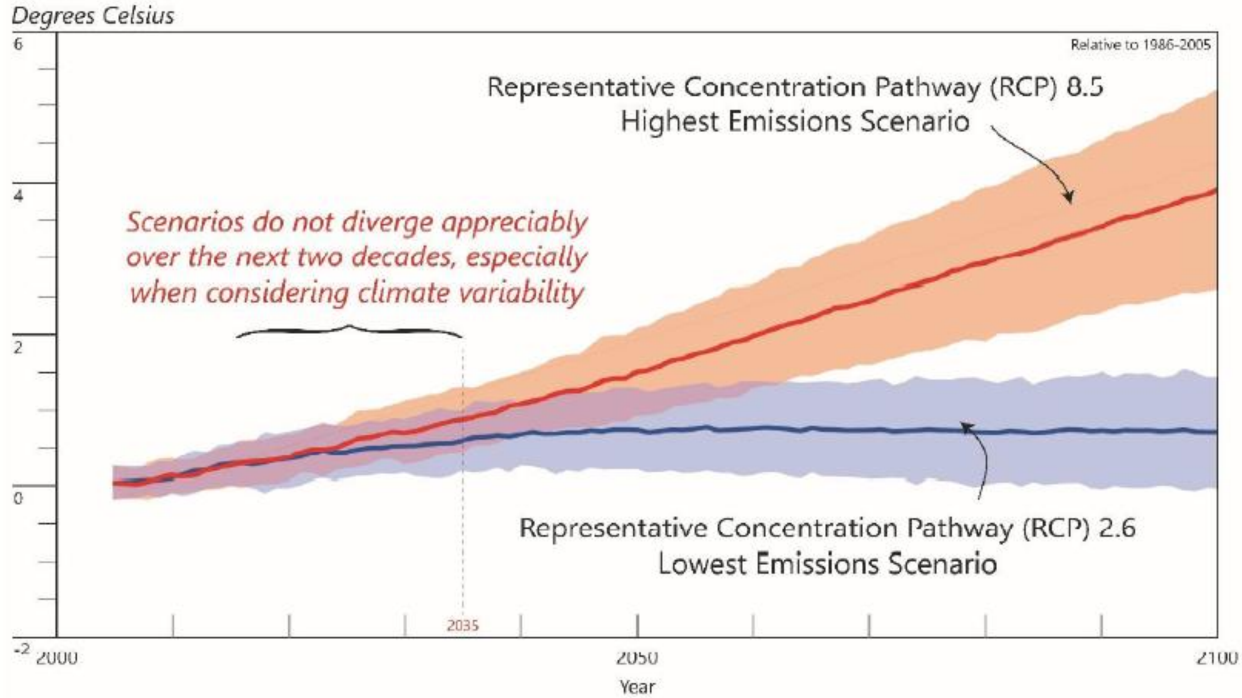
> These effects will be especially pronounced as populations continue to concentrate in climate-vulnerable locales such as coastal areas, water stressed regions, and ever-growing cities. These effects are likely to pose significant national security challenges for the United States over the next two decades, though models forecast the most dramatic effects further into the future. While specific extreme weather events remain difficult to attribute entirely to climate change, unusual patterns of extreme and record-breaking weather events are likely to become more common, according to the Intergovernmental Panel on Climate Change (IPCC).
>
> - Extreme weather events, such as heavy rainfalls, floods, droughts, cyclones, and heatwaves, will disrupt critical human and natural systems. They could trigger crop failures, wildfires, energy blackouts, infrastructure breakdown, or infectious disease outbreaks. The frequency and magnitude of such events are increasing as the climate changes, according to the IPCC.
> - Moreover, multiple weather disturbances—when several extreme weather events occur within a small region or short time—compound their impact while undercutting efforts by people and governments to cope. Clusters or rapid sequences of relatively modest weather events may cause more damage than very powerful single events.
> - Global climatological stresses—such as sea-level rise, ocean acidification, permafrost and glacial melt, air quality degradation, changes in cloud cover, and sustained shifts in temperature and precipitation—could substantially alter broader natural and manmade systems involving where and how humans live and patterns of infectious disease outbreaks, as well as critical ecosystems.[86]

Courtesy of the 2016 U.S. National Intelligence Council memorandum, Exhibit 2 illustrates Projected Average Surface Temperature Change.

---

[85] *Id.*
[86] *Id.* at 5.

Exhibit 2
Projected Average Surface Temperature Change[87]



Company Spend on ESG Increases

The Wall Street Journal reports on June 15, 2021 that "Companies are racking up hefty bills as they invest in new facilities and products to reduce emissions or meet other targets, hoping for a payoff down the road."[88] Almost all major business are encountering "pressure from investors, lawmakers and regulators who demand more details on their spending plans and the progress they are making to achieve their environmental, social and governance goals."[89] The ESG corporate value proposition happens in several scenarios. For example, "Ratings firms in recent months cut the credit outlooks of oil-and-gas companies or down-graded them, citing risks associated with the transition to

[87] *Id.* at 12, *citing* Intergovernmental Panel on Climate Change, Fifth Assessment Rpt. (Sept. 2013) (observing "the bold curves represent averages in global surface temperatures determined from computer modeling, but the actual trajectory will have many peaks (higher than average) and valleys (lower than average). The peaks are qualitatively important because they likely represent snapshots of future average climate conditions.).
[88] Kristin Broughton & Mark Maurer, *Companies Spend Big on ESG*, WALL ST. J., June 15, 2021 at B7.
[89] *Id.*

green power and other factors… Credit downgrades can increase companies' borrowing costs and hurt stock prices."[90] Changes in ESG behavior abound over a wide range of industries, as "car makers such as General Motors and Ford Motor Co. are boosting investments in electric vehicles, while utilities including Xcel Energy Inc. and CenterPoint Energy Inc. are producing more renewable power."[91] We will now look at several specific industries: electric vehicles; and energy.

Shift Toward Electric Vehicles

America's love affair with the automobile remains a major source of carbon emissions. Offering incentives for the purchase of electric-powered vehicles is a cornerstone of President Biden's climate policy.[92] During late 2021, The Wall Street Journal reports, "Hertz Global Holdings Inc… is mak[ing] 50,000 Teslas available in Uber's ride-sharing network by 2023… just days after Hertz… said it is making a significant investment in an EV rental fleet, including an initial order of 100,000 Teslas by the end of 2022."[93] President Biden's $1.85 Trillion Framework for Economic Programs included "$555 billion to fight climate change, largely through tax incentives for low-emission sources of energy,"[94] including incentives for the purchase of electric-powered vehicles.

During January 2022 BlackRock Chief Executive Larry Fink writes, "In a few short years, we have all watched innovators reimagine the auto industry. And today,

---

[90] *Id.*
[91] *Id.*
[92] Fact Sheet: President Biden Announces Steps to Drive American Leadership Forward on Clean Cars and Trucks, WHITE HOUSE (Aug. 5, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/08/05/fact-sheet-president-biden-announces-steps-to-drive-american-leadership-forward-on-clean-cars-and-trucks/.
[93] Nora Naughton, *Hertz to Provide Uber With Tesla Rentals*, WALL ST. J., Oct. 28, 2021 at A1.
[94] Jim Tankersley & Zolan Kanno-Youngs, *A $1.85 Framework for Economic Programs…*, N.Y. TIMES, Oct. 29, 2021 at A15.

every car manufacturer is racing toward an electric future. The auto industry, however, is merely on the leading edge — every sector will be transformed by new, sustainable technology."[95]

Energy Generation

On July 10, 2021, *The Wall Street Journal* reports that "Coal plants aren't just the heaviest polluters… [but] are expensive to run. Coal supplies roughly 20% of U.S. power, down from more than half in 2008, but most of these plants operated at losses last year. Ratepayers often cover the difference so the utilities' investors can earn a return."[96] Political reluctance to reduce coal production in the United States has been most vocal in those five states responsible for producing about 71% of total U.S. output: Wyoming (39.2%); West Virginia (13.2%); Pennsylvania (7.1%); Illinois (6.5%); and Kentucky (5.1%).[97] Exhibit 3 depicts coal as a percentage of U.S. energy generation during the last decade.

Impact of Pollution on Agriculture

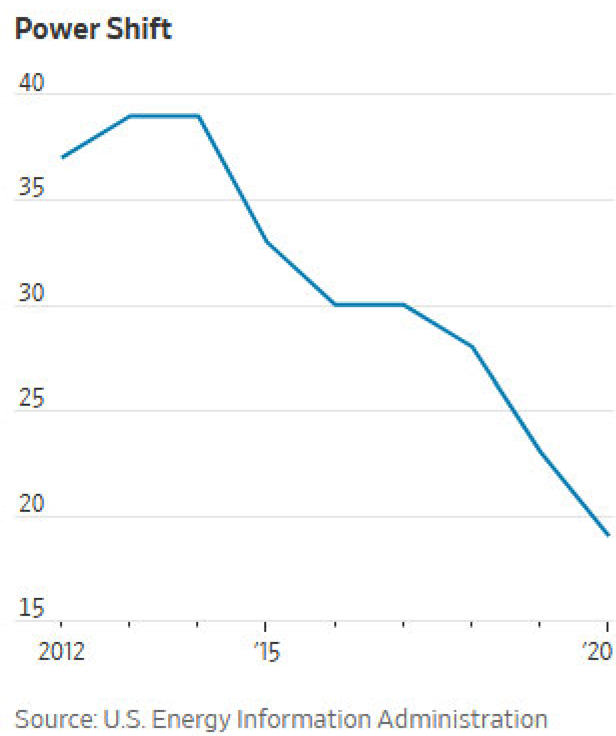
On January 20, 2022, *The Wall Street Journal* reports, "Bees and butterflies play a vital role in agriculture. But new research… shows common air pollutants can interfere with pollination and thus the cultivation of crops by making it hard for some insects to sniff out… aromatic flowers where they sip nectar and nosh on pollen."[98] The Journal Environmental Pollution states, "'Diesel exhaust and ozone pollution can react with the

[95] *See* Larry Fink's 2022 Letter to CEOs, *supra* note 21.
[96] Scott Patterson, *Bonds Used to Fund Coal-Plant Closures,* WALL ST. J., July 10, 2021 at B12.
[97] Which States Produce the Most Coal?, U.S. Energy Information Administration (EIA) (Oct. 19, 2020)(data for 2019), https://www.eia.gov/tools/faqs/faq.php?id=69&t=2 (last viewed July 10, 2021).
[98] Aylin Woodward, *Pollution Impedes Bees' Crop Pollination,* WALL ST. J., Jan. 20, 2022 at A3.

chemicals that make up the floral odors that insects use to find flowers,' said James Ryalls, a University of Reading research fellow and lead author."[99] Consider:

> Bees and butterflies rely primarily on their sense of smell to locate patches of flowers before homing in on individual plants by sight. As the insects flit between flowers collecting pollen… that process helps plants make seeds and reproduce.
>
> The insects ability to find flowers was impaired even at pollutant concentrations below the range deemed dangerous by U.S. law, the research showed… Pollinators play a role in up to $577 billion worth of global crops cultivated each year, according to a report issued in 2016 by the United Nations Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. At least 70% of crop species rely on insect pollination, Dr. Ryalls said.[100]

Exhibit 3
Coal as a Percentage of U.S. Energy Generation[101]



[99] *Id.*
[100] *Id.*
[101] Scott Patterson, *Bonds Used to Fund Coal-Plant Closures*, WALL ST. J., July 10, 2021 at B12, https://www.wsj.com/articles/utilities-pay-for-coal-plant-closures-by-issuing-bonds-11625828400.

According to *The Wall Street Journal,* "a new twist on an old financial tool is helping electric utilities shut down unprofitable coal-fired power plants, cutting greenhouse-gas emissions and often lowering costs for consumers. Utilities in Michigan, Wisconsin and New Mexico have employed:

> The strategy, which is being pushed by environmental groups [to use] securitization to help finance the shutdown of the plants. In the past year, three utility operators have committed to more than $1 billion in securitizations to help retire coal-fired power plants.
>
> Securitization is one of many efforts by Wall Street to reduce greenhouse-gas emissions while also making a profit. Green bonds and investment funds that have environmental goals as part of their mandate are raking in cash. Wall Street has helped raise billions of dollars for electric vehicles, battery and alternative-energy companies.
>
> Utilities have used securitization for decades to fund one-time expenses or to help pay off so-called stranded assets, facilities that are shut down before they have paid for themselves. Increasingly, utilities are looking at their unprofitable coal plants as potential stranded assets, and some see securitization as a way to wind them down ahead of schedule…
>
> The utility can then use the proceeds to pay off debt and other liabilities related to unprofitable coal plants. It can use any excess proceeds for new investments, including clean power sources, as well as for jobs training in communities affected by the shutdowns. The upside for customers: The interest rate on the new bonds is usually lower than the rates on the original debt and equity, leading to savings down the road.[102]

[102] *Id.*

III. SOCIAL

> *"Too many businesses fail to recognize the significant impacts they have on the environment, on other creatures that inhabit the planet (such as wildlife and livestock animals), and on the physical health and psyches of team members and customers. Many businesses have created stressful and unfulfilling working conditions and fostered and fed unhealthy appetites and addictions in their customers. Many companies tend to treat all these as externalities, outside the scope of their own concerns."*
>
> *John Mackey*
> *Raj Sisodia*[103]

Given the limited page availability for any single law review article, we have chosen to focus our writing here on the environmental and climate part of ESG. However, we will mention that there are many excellent examples of scholarship that cover the "social" part of ESG.[104] Vanderbilt Professor of Law and Management Amanda M. Rose observes that the broad array of ESG issues include topics such as "human capital management, supply chain management, human rights, cybersecurity, diversity and inclusion… corporate political spending… and [much] more."[105] Professors Stavros Gadinis and Amelia Miazad write, "We live in an era of huge business disruption, where successful startups can become multi-billion dollar companies in the span of a few years."[106] Even when no laws are being violated, ESG issues address social and ethical challenges, often created by rapidly changing technological innovation. Consider:

> The explosion of social media has driven millions of users to voluntarily relinquish their private information online and only slowly come to grips

---

[103] JOHN MACKEY & RAJ SISODIA, CONSCIOUS CAPITALISM 18 (2013).

[104] Lisa Friedman, *As Challenges Mount, Biden's Climate Legacy Races Against Clock*, N.Y. TIMES, Jan. 5, 2022 at A15.

[105] Amanda M. Rose, A Response to Calls for SEC-Mandated ESG Disclosure, 98 WASH. U. L. REV. (2021).

[106] Stavros Gadinis & Amelia Miazad, *Corporate Law and Social Risk*, 73 VAND. L. REV. 1401 (2020), *citing* Zoë Bernard, *10 Startups that Became Worth Billions in Less than 3 Years*, BUS. INSIDER (May 1, 2018).

> with the myriad ways in which this can be exploited. The sharing economy is revolutionizing workforce arrangements, redesigning our urban domains, and dislocating long-term residents. Artificial intelligence expands the use of computing power into new areas, substituting human judgment with pre-calibrated algorithms…
>
> It takes time until the real impact of the problem is fully revealed, touching a broad enough base of voters to spur lawmakers into action. This lengthy process is further complicated by political deadlock and polarization… Faced by narratives of unsuspected victims suffering harm they did not bargain for, the company can hardly protect itself by pointing that it did not actually violate any laws. Thus, the absence of legal obligations, which might have been welcome when business was developing, will turn into a drawback when the true extent of the harm is revealed. To avoid this outcome, the company needs a clear-eyed perspective on the interests of affected constituents, and decisive action to protect the ones most valuable for the company in the long run. The ESG function is well-equipped to serve this role.[107]

We are also indebted to Professors Gadinis and Miazad for their observation that "When ESG operates as a crisis prevention tool, its success lies in helping a company avoid turbulence... Due to the nature of risk prevention, it is hard for shareholders to monitor companies effectively"[108] As an example of one of these crisis situations that might not be expected, the authors write, "the crisis might hit immediately such as in the #MeToo context. But the chances that the company will face a #MeToo problem in a given year are lower than…"[109] the probability of an executive compensation, for example.

<u>Privacy</u>

Facebook provides an example helping us to better understand the spectrum of ESG issues that may present with essentially no notice. Professors Gadinis and Miazad teach, "The most recent Facebook/Cambridge Analytica debacle exemplifies a profound

[107] *Id.* at 33.
[108] *Id.* at 55.
[109] *Id.*

corporate crisis, unabated by the absence of any primary legal violations that a robust sustainability function could have helped to avoid."[110] Just one example of privacy concerns:

> Even though Facebook could claim to have obtained the contractual consent of its users for exploiting their data, it faced accusations that its practices violated users' privacy. Mark Zuckerberg found himself the unwilling protagonist of a ritualistic congressional hearing, culminating in a humbling apology to stem the slide of the company's share price. He repeated time and again that no laws were violated, but shareholders could not have been happy with how the debacle unfolded within the company. In the end, Zuckerberg stated that regulation was 'inevitable' recognizing the need for a stricter framework.[111]

Diversity and Inclusion

Corporate consideration of ethnic and racial diversity has been a subject of concern for many decades.[112] During 2020 and 2021, the United States continues to

---

[110] *Id.*

[111] *Id. See also* Lindsay Sain Jones & Tim R. Samples, Systemically Important Platforms, (unpub. ms.) (2022); Lawrence J. Trautman, *Governance of the Facebook Privacy Crisis*, 20 PITTS. J. TECH. L. & POL'Y 41 (2020), http://ssrn.com/abstract=3363002; Lawrence J. Trautman, *How Google Perceives Customer Privacy, Cyber, E-Commerce, Political and Regulatory Compliance Risks*, 10 WM. & MARY BUS. L. REV. 1 (2018), https://ssrn.com/abstract=3067298; Lawrence J. Trautman, Mohammed T. Hussein, Louis Ngamassi & Mason Molesky, *Governance of The Internet of Things (IoT)*, 60 JURIMETRICS 315 (Spring 2020), http://ssrn.com/abstract=3443973. Lawrence J. Trautman, Mohammed T. Hussein, Emmanuel U. Opara, Mason J. Molesky & Shahedur Rahman, *Posted: No Phishing*, 8 EMORY CORP. GOV. & ACCT. REV. 39 (2021), http://ssrn.com/abstract=3549992; Lawrence J. Trautman & Peter C. Ormerod, *Corporate Directors' and Officers' Cybersecurity Standard of Care: The Yahoo Data Breach*, 66 AM. U. L. REV. 1231 (2017), http://ssrn.com/abstract=2883607; Lawrence J. Trautman & Peter C. Ormerod, *Industrial Cyber Vulnerabilities: Lessons from Stuxnet and the Internet of Things*, 72 U. MIAMI L. REV. 761 (2018), http://ssrn.com/abstract=2982629; Lawrence J. Trautman, *Rapid Technological Change and U.S. Entrepreneurial Risk in International Markets: Focus on Data Security, Information Privacy, Bribery and Corruption*, 49 CAP. U. L. REV. 67 (2021), https://ssrn.com/abstract=2912072; David D. Schein & Lawrence J. Trautman, *The Dark Web and Employer Liability*, 18 COLO. TECH. L.J. 49 (2020), http://ssrn.com/abstract=3251479; Lawrence J. Trautman & Peter C. Ormerod, *WannaCry, Ransomware, and the Emerging Threat to Corporations*, 86 TENN. L. REV. 503 (2019), http://ssrn.com/abstract=3238293.

[112] Lawrence J. Trautman, *Corporate Boardroom Diversity: Why Are We Still Talking About This?*, 17 SCHOLAR 219 (2015), http://www.ssrn.com/abstract=2047750.

encounter numerous examples of economic inequality and racial intolerance.[113] SEC Commissioner Allison Herren Lee states:

> recent events have provided a real-time case study on the need for many of these disclosures. It has never been more clear that investors need information regarding, for example, how companies treat and value their workers, how they prioritize diversity in the face of profound racial injustice, and how their assets and business models are exposed to climate risk as the frequency and intensity of climate events increase. This year's upheavals have driven home that ESG risks, like those associated with diversity and climate change, are strong predictors for resilience and for maximizing risk-adjusted returns…
>
> And we have declined to go beyond merely introducing the topic of human capital generally, despite investors' views that this is not nearly enough. I would have supported today's final rule if it had included even minimal expansion on the topic of human capital to include simple, commonly kept metrics such as part time vs. full time workers, workforce expenses, turnover, and diversity. But we have declined to take even these modest steps…
>
> On diversity then, should we assume that management at the hundreds (if not thousands) of companies that don't provide data on workforce diversity have carefully and accurately determined that the information is not material to their business? That would be a questionable conclusion to make given the growing body of research showing the strong business case for diversity. In fact McKinsey & Company, which has been researching and analyzing the topic for years, released a study in May of this year showing that companies in the top quartile for ethnic diversity on executive teams outperformed those in the bottom quartile by 36 percent in profitability (internal citations omitted).[114]

We now highlight the recent contributions by seasoned corporate directors Seletha Butler, Michelle Hooper, Ron McCray, and Ruth Simmons as they join with cyber risk expert Frederick Chang to discuss many "social" aspects of corporate governance,

---

[113] Lawrence J. Trautman & Eddie Bernice Johnson, *The Demographics of Death: An Early Look at Covid-19, Cultural and Racial Bias in America*, 48 HASTINGS CONST. L.Q. 357 (2021), http://ssrn.com/abstract=3677607.

[114] Statement by Allison Herren Lee, *supra* note 19.

including board diversity.[115] Veteran of many major corporate boards and university president Ruth Simmons states:

> There are very prominent African Americans in this country who have the required financial knowledge, who have the contacts, who have enough of the education needed in all areas to be wonderful corporate directors. I've repeatedly heard boards pass on candidates because the minority candidates: may be too 'controversial;' they may be too 'outspoken;' or they may be too 'full of themselves'. And so, it's just that kind of thing that you hear repeatedly in boardrooms in passing over qualified individuals, particularly outspoken, intelligent, capable candidates… who are women and/or minorities. And the idea is, 'we don't want all that noise in the boardroom.' We just want somebody who is going to be like us, it's very discouraging.[116]

IV. CORPORATE GOVERNANCE

> *"Corporate governance is a huge issue too. We don't have women on these corporate boards. More than half of the students in law school are women, more than half of the women, I think, in medical school now are women."*
>
> *Claire McCaskill (D-Mo.)*
> *U.S. Senator*
> *June 2012*[117]

<u>Director Liability Developments</u>

Corporate directors owe fiduciary duties to their corporation. Elsewhere, Professors Pace and Trautman write, "Those duties are owed to the corporation itself, not to its shareholders, but shareholders can often bring a suit for breach of duty on behalf of the corporation via a derivative suit."[118] Evolution of corporate law teaches, "The

---

[115] *See* Lawrence J. Trautman, Seletha Butler, Frederick Chang, Michele Hooper, Ron McCray & Ruth Simmons Corporate Directors: Who They Are, What They Do, Cyber and Other Contemporary Challenges, 70 BUFFALO L. REV. 459 (2022), http://ssrn.com/abstract=3792382.

[116] *Id.* at __.

[117] Tim Mak, *McCaskill Touts 'Paycheck Fairness,'* Politico (June 5, 2012), https://www.politico.com/story/2012/06/mccaskill-touts-paycheck-fairness-077053.

[118] *See* H. Justin Pace & Lawrence J. Trautman, Mission Critical: *Caremark*. *Blue Bell*, and Director Responsibility for Cybersecurity Governance, __ WIS. L. REV. (forthcoming), http://ssrn.com/abstract=3938128, *citing* Roy Shapira, *A New* Caremark *Era: Causes and Consequences*, forthcoming WASH. U. L. REV. at *6 n.14 ("To bring a derivative claim, the plaintiff first has to make a demand on the company's board to pursue that claim. To survive the

fiduciary duties owed by directors have traditionally been grouped into a duty of care and a duty of loyalty."[119] A reasonable question for us here is whether the *Caremark* director liability regime will come to be extended as the climate crisis escalates during the future to include issues now broadly characterized as ESG? Pace and Trautman write:

> Under what has come to be known as a *Caremark* claim, directors can be held liable for breach their fiduciary duties to the corporation for failing to provide adequate oversight. *Caremark* claims typically arise where corporate employees caused the corporation to engage in some unlawful conduct, and plaintiffs allege the unlawful conduct would not have taken place had directors acted properly. There are two types of *Caremark* claims: failure to implement ("Type I") claims and failure to monitor ("Type II") claims. Under a Type I claim, the plaintiff alleges that "the directors utterly failed to implement any reporting or information system or controls." Under a Type II claim, the plaintiff alleges that although the board implemented controls it "consciously failed to monitor or oversee its operations thus disabling themselves from being informed of risks or problems requiring their attention." Conscious disregard is necessary; *Caremark* is a high bar.
>
> The scope and likelihood of *Caremark* liability are matters of considerable interest and concern for directors. Under most circumstances, a board simply doing its job poorly is relevant only to the directors' duty of care and protected by the business judgment rule, exculpatory provisions under Section 102(b)(7), and advancement and indemnification. Failure to monitor under *Caremark*, however, is a breach of the duty of loyalty. A breach of the duty of loyalty is not protected by the business judgment rule. It cannot be exculpated. And it cannot be covered by indemnification.
>
> 2019 marked an abrupt shift in *Caremark* in application, if not in theory. In June of that year the Supreme Court of Delaware ("Delaware Supreme Court") reversed a decision by the Delaware Court of Chancery ("Chancery Court") dismissing a claim against the directors of Blue Bell Creameries, Inc. ("Blue Bell") under *Caremark*. Blue Bell is a manufacturer and seller of ice cream, and the plaintiffs' *Caremark* claim alleged the board failed to implement food safety controls. Poor food

---

demand-requirement stage, plaintiffs practically need to convince the court that demand is futile because the company's board cannot be trusted to make the right decision, for example, because directors themselves face a significant threat of personal liability.") (citing Aronson v. Lewis, 473 A.2d 805, 811 (Del. 1984); Rales v. Blasband, 634 A.2d 927, 930 (Del. 1993)).

[119] *See* Pace & Trautman, *supra at Id., citing* Claire A. Hill & Brett H. McDonnell, Stone v. Ritter *and the Expanding Duty of Loyalty*, 76 FORDHAM L. REV. 1769, 1771 (2007); Lisa Fairfax, *Managing Expectations: Does the Director's Duty to Monitor Promise More than It Can Deliver*, 10 U. ST. THOMAS L.J. 416, 419 (2012) (citing Julian Velasco, *How Many Fiduciary Duties Are there in Corporate Law?,* 83 S. CAL. L. REV. 1231, 1232–32 (2010)).

safety practices led to a listeria outbreak tied to Blue Bell ice cream that claimed three lives. Notably, the Delaware Supreme Court emphasized that Blue Bell Creameries is a single product company and thus food safety is existential.

The Chancery Court took the Delaware Supreme Court's hint. Within a little over a year, the Chancery Court would sustain *Caremark* claims in four cases. In *Clovis*, the Chancery Court sustained a *Caremark* claim against directors of a pharmaceutical company who allowed the company to misrepresent the clinical trial success of one of its three drugs. In *Hughes*, the Chancery Court sustained a *Caremark* claim against directors of a Chinese company incorporated in Delaware that suffered from severe and pervasive accounting issues. In *Teamsters Local*, the Chancery Court sustained a *Caremark* claim against directors of a large pharmaceutical company who allowed an indirect subsidiary to essentially operate a criminal enterprise. And in *Boeing*, the Chancery Court sustained a *Caremark* claim against directors of an airplane manufacturer who did not pay attention to safety issues. (internal citations omitted)[120]

[120] *See* Pace & Trautman, *supra* note 118. *See also* Lawrence J. Trautman, *The Board's Responsibility for Crisis Governance,* 13 HASTINGS BUS. L.J. 275 (2017), http://ssrn.com/abstract=2623219; Lawrence J. Trautman & *The Board's Responsibility for Information Technology Governance*, (with Kara Altenbaumer-Price), 29 J. MARSHALL J. COMPUTER & INFO. L. 313 (2011), http://www.ssrn.com/abstract=1947283; Lawrence J. Trautman, Jason Triche & James C. Wetherbe *Corporate Information Technology Governance Under Fire,* 8 J. STRAT. & INT'L STUD. 105 (2013), http://ssrn.com/abstract=2314119; Lawrence J. Trautman & Janet Ford, *Nonprofit Governance: The Basics*, 52 AKRON L. REV. 971 (2018), https://ssrn.com/abstract=3133818; Lawrence J. Trautman, *Managing Cyberthreat,* 33 SANTA CLARA HIGH TECH. L.J. 230 (2016), http://ssrn.com/abstract=2534119; Lawrence J. Trautman, *E-Commerce, Cyber and Electronic Payment System Risks: Lessons from PayPal,* 17 U.C. DAVIS BUS. L.J. 261 (Spring 2016), http://www.ssrn.com/abstract=2314119; Lawrence J. Trautman, *Who Sits on Texas Corporate Boards? Texas Corporate Directors: Who They Are and What They Do,* 16 HOUS. BUS. & TAX L.J. 44 (2016), http://ssrn.com/abstract=2493569.

V. THE SEC AND DISCLOSURE

> *"Public disclosure isn't new. We've been requiring disclosure of important information from companies since the Great Depression. The basic bargain is this: investors get to decide what risks they wish to take. Companies that are raising money from the public have an obligation to share information with investors on a regular basis. Over the decades, there's been debate about disclosure on things that, today, we consider pretty essential for shareholders.*
>
> *Today, investors increasingly want to understand the climate risks of the companies whose stock they own or might buy. Large and small investors, representing literally tens of trillions of dollars, are looking for this information to determine whether to invest, sell, or make a voting decision one way or another."*
>
> *Gary Gensler*
> *Chairman, Securities and Exchange Commission*
> *July 28, 2021*[121]

The Basic Disclosure Regime

Before you buy a car you want to know its history. Has it been in any accidents? How many miles does it have on it? What is the car's repair and maintenance history? What, if anything, is currently wrong with it? The idea there is that the buyer is making an informed decision. With full and fair disclosure, the car buyer knows what he is taking on and the possible risks involved.

The premise is the same for investing in publicly traded companies; that investors make fair and informed decisions by requiring companies to disclose all "material" financial and business information regarding the company.[122] And that this information

[121] Prepared Remarks Before the Principles for Responsible Investment "Climate and Global Financial Markets" Webinar (Jul. 28, 2021), https://www.sec.gov/news/speech/gensler-pri-2021-07-28.

[122] This is in accordance with the SEC's mission. https://www.sec.gov/about.shtml. The United States Supreme Court (the "Supreme Court"), in TSC Industries, Inc. v. Northway Inc., 426 U.S. 438 (1976) ("TSC Industries"), addressed the subject of materiality in the context of securities

be made readily available to the investing public on a periodic and ongoing basis.[123] Although the premise upon which the federal and state securities laws are based is intuitive, the execution of same is complex. The current disclosure regime governing the buying and selling of securities was spawned during the early part of the 1900's. Recall the great depression and the collapse in the stock market that occurred in 1929.[124] From these events, government recognized that a more formal process needed to be put in place regarding the buying and selling of ownership in companies. The history surrounding the first federal securities law act is a storied one. In fact, it took two attempts before congress had an act it was willing to move forward with.[125]

The first attempt failed due to the initial act's ideological focus. Instead of the informed disclosure regime that we now have, the first attempt was based off of what is referred to as "merit regulation." Merit regulation is an approach that would require regulators in essence to pick stock winners and losers; a speculative endeavor at best and one fraught with what are now clear problematic pitfalls that would result if the

fraud, finding that a fact is material if there is "a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote…

More than a decade later, in Basic Inc. vs. Levinson, 485 U.S. 224 (1988), the Supreme Court reiterated the TSC Industries standard of materiality, stating that something is material if there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available." Id. at 231-32

[123] The SEC requires all publicly traded companies to file quarterly financial information every three months – referred to as 10-Q's and Annual financial reports (10-K's), every 12 months. The required disclosures and forms of disclosure vary depending on the situation and the registrant. In general, under Section 13(a) of the Exchange Act (codified in 15 U.S.C. § 78m),

[124] The Great Depression was the worst economic downturn in the history of the industrialized world, lasting from 1929 to 1939. It began after the stock market crash of October 1929, which sent Wall Street into a panic and wiped-out millions of investors. Over the next several years, consumer spending and investment dropped, causing steep declines in industrial output and employment as failing companies laid off workers. By 1933, when the Great Depression reached its lowest point, some 15 million Americans were unemployed and nearly half the country's banks had failed. https://www.history.com/topics/great-depression/great-depression-history

[125] *See* "A Brief History of the 1930s Securities Laws in the United States – And the Potential Lesson for Today" - Larry Bumgardner, Graziadio School of Business and Management, Pepperdine University - http://www.jgbm.org/page/5%20Larry%20Bumgardner.pdf.

government was in the business of deciding which stocks may be worthy and which stocks may be unworthy for public consumption.[126]

Regarding the second attempt. "Harvard law professor (and future Supreme Court Justice) Felix Frankfurter was called in to develop a revised bill. Frankfurter's team including James Landis, Benjamin Cohen, and Tommy Corcoran drafted a bill following the British securities law approach, based primarily on full disclosure of material information leaving it to investors, rather than the government to judging the merits of any stock offer.[127] For political reasons, Frankfurter's team decided to start with the failed first draft to use as the basis for drafting the piece of legislation that has stood the test of time and is substantively the same document that was drafted some 88 years ago. As the story is told, Frankfurter's team penned the Securities Act of 1933 over a weekend. To this day, scholars still marvel at the '33 Acts idiosyncratic nature. The Act has been described as "*a masterpiece*", "*a writing with interwoven complexities and neatly hidden traps*", "*an intellectual Tour de Force*", "*a complex mental game derived by three exceptional minds*." The author can attest that the Act is quite unique in the way it is constructed. It is all that it is referred to and more.

The rules and regulations that have been promulgated from the Securities Act of 1933, however are much less idiosyncratic and much more practical. At the heart of the SEC's current disclosure regime is what is referred to as Regulation S-K.[128] Regulation S-K lays out in great detail the depth, breadth, and nature of the type of information that needs to be disseminated to the public. In addition to Regulation S-K, is Regulation S-

[126] See Comparison Between Merit Based Regulation and Disclosure Based Regulation - https://www.mbaknol.com/international-finance/comparison-between-merit-based-regulation-and-disclosure-based-regulation/.
[127] *See* Bumgardner, *supra* note 125.
[128] Regulation S-K [17 CFR Part 229].

X.[129] Regulation S-X speaks to the required accounting and financial information that must be disclosed in documents that are filed with the Commission.

In addition to Regulation S-K, and Regulation S-X, there are a number of different forms that issuers use when making required public disclosures. For example, when issuers are offering shares to the public for the very first time, they must file what is referred to as a Form S-1.[130] Accordingly, Form S-1 provides the template and Regulations S-K and S-X layout specifically what substantively needs to be disclosed within the template.

To illustrate, in Form S-1 – PART 1, Item 3 relates to "*Summary Information and Risk Factors*" – Within the S-1 template it says, *"Furnish the information required by Items 105 and 503 in Regulation S-K.[131]"* Accordingly, the issuer would then go to Items 105 and 503 is Regulation S-K. Item 105 requires the following:

Item 105- Risk Factors

> *"Where appropriate, provide under the caption "Risk Factors" a discussion of the most significant factors that make an investment in the registrant or offering speculative or risky. This discussion must be concise and organized logically. Do not present risks that could apply generically to any registrant or any offering. Explain how the risk affects the registrant or the securities being offered. Set forth each risk factor under a sub caption that adequately describes the risk…"*

Once the registrant files the offering document; the Form S-1 in the example noted above, the SEC's Division of Corporate Finance will review for adequate disclosure.[132] The reviewer in the Division of Corporate Finance will use these same regulations – Regulation S-K and Regulation S-X to determine if the Registrant's

---

[129] **Regulation S-X** [17 CFR Part 210].
[130] Form S-1 Template - https://www.sec.gov/about/forms/forms-1.pdf.
[131] *Id.*
[132] *See* the SEC's Division of Corporate Finance - https://www.sec.gov/divisions/corpfin/cfabout.shtml.

disclosures are adequate and compliant. This is generally how the SEC's disclosure regime works. Keep in mind, the threshold for disclosure is all "material" business and financial information regarding the registrant. "Material" information is any information that would have a bearing on a reasonable investor's decision to buy, hold, or sell a share of stock.[133] If the information relating to the registrant's business or finances is material, then the securities laws require that the information be disclosed.

The Audit Component

Accounting and financial reporting is a part of the SEC's disclosure regime and has its own regulatory rubric through which financial information must be vetted. Companies offering their shares to the public must include financial statements that are audited by an independent public accountant. The regulatory framework surrounding this function again is another labyrinth of dense rules and regulatory requirements. But summarily, the public accountants performing the audit must be "independent," and the audit must be performed in accordance with a number of regulatory requirements, not the least of which being, within the guidelines of the Public Company Accounting Oversight Board (PCAOB)[134], and in accordance with Generally Accepted Auditing Standards

---

133 This is in accordance with the SEC's mission. https://www.sec.gov/about.shtml. The United States Supreme Court (the "Supreme Court"), in TSC Industries, Inc. v. Northway Inc., 426 U.S. 438 (1976) ("TSC Industries"), addressed the subject of materiality in the context of securities fraud, finding that a fact is material if there is "a substantial likelihood that a reasonable shareholder would consider it important in deciding how to vote…
More than a decade later, in Basic Inc. vs. Levinson, 485 U.S. 224 (1988), the Supreme Court reiterated the TSC Industries standard of materiality, stating that something is material if there is "a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available." Id. at 231-32.

134 https://pcaobus.org/about.

(GAAS).[135] Finally, the financial statements must be prepared in accordance with Generally Accepted Accounting Principles (GAAP).[136]

Auditor independence is a concept – the goal of which being that the auditor's relationship with the entity being audited is such that the auditor's objectivity is not compromised and the auditor can make his assessment on whether the financial statements are a fair representation of the company's financial condition and results of operations.[137] Historically, the dial denoting auditor independence has evolved overtime and has been ratcheted up due to some high profile audit failures that occurred in the early part of 2000. The most prominent of which was the monumental financial fraud that the Houston based corporation Enron perpetrated over a short but critical period of time in the early 2000s.[138] What was most disturbing about Enron's reporting of fraudulent financial information was the total breakdown of the gatekeeping functions that were supposed to prevent something like that from happening.[139]

Enron management whose responsibility was to generate financial information that was a fair representation of the company's financial condition and results of operations failed miserably at this and did so intentionally.[140] Their actions were the tip of the spear of the massive accounting fraud Enron perpetrated on the investing public.

---

135 https://www.aicpa.org/research/standards/auditattest.html.

136 Generally accepted accounting principles, or GAAP, are standards that encompass the details, complexities, and legalities of business and corporate accounting. The Financial Accounting Standards Board (FASB) uses GAAP as the foundation for its comprehensive set of approved accounting methods and practices. - https://www.accounting.com/resources/gaap/. *See also* Lawrence J. Trautman, *The Matrix: The Board's Responsibility for Director Selection and Recruitment,* 11 FLA. ST. U. BUS. REV. 75 (2012), http://www.ssrn.com/abstract=1998489.

137 See https://pcaobus.org/oversight/standards/auditing-standards/details/AS1005 -For a more robust discussion on auditor independence and what it fully entails.

138 *See* C. William Thomas, *The Rise and Fall of Enron: When a company looks too good to be true, it usually is,* WALL ST. J., (Mar. 31, 2002), https://www.journalofaccountancy.com/issues/2002/apr/theriseandfallofenron html.

139 *Id.*

140 *Id.*

The Board of Directors who were supposed to be a check on management either acquiesced to what was happening or failed to understand and flag the sophisticated accounting fraud measures in which Enron engaged.[141] Outside counsel to Enron who had a legal and fiduciary obligation to flag problematic transactions, instead opined as to the propriety of such transactions and gave the transactions their blessing.[142] Finally the public accountants were supposed to audit the financial statements and catch financial statement balances that were materially misstated. Instead, the accountants signed off on accounting and financial that were a far departure from economic reality.[143] When it finally came to light that Enron's financial reports were an ongoing and sophisticated form of accounting fraud, Enron filed for bankruptcy and many investors who had trusted the company and its public filings lost millions.

Enron's high profile and devastating collapse was the tipping point that resulted in what was then the most far-reaching piece of legislation dealing with public company disclosure since the passing of the Securities Act of 1933; the Sarbanes Oxley Act. The Sarbanes Oxley Act's provisions – in theory -were designed to shore up the many failures in the gatekeeping functions that the Officers, Directors, lawyers, and public accountants were supposed to serve.[144] Most of Sarbanes' provisions can be traced back to addressing each of these gatekeeping functions.

---

[141] *Id.*
[142] James V. Grimaldi & Peter Behr, Houston Law Firm Helped Craft Enron Deals, WASH. POST (Jan. 27, 2002), https://www.washingtonpost.com/archive/politics/2002/01/27/houston-law-firm-helped-craft-enron-deals/a4011343-6a7e-432b-a526-697849e9bf1d/.
[143] *Id.*
[144] Sarbanes-Oxley Act, Ben Lutkevich, Technical Writer - https://searchcio.techtarget.com/definition/Sarbanes-Oxley-Act

As a result of the Sarbanes Oxley Act, in publicly filed documents, corporate executives must certify as to the accuracy of information contained in the filing.[145] When Enron executives testified before Congress in the aftermath of Enron's collapse, the extent to which these executives pled ignorance to the financial reporting – in any other setting, such lack of knowledge would have been grounds for termination.[146] Sarbanes Oxley's certification requirement was designed to make sure executives took ownership and responsibility of the information contained in those statements.

Similarly, public company board of directors now have to have a person who can be deemed as a "financial expert" – defining that term in the Act was the source of much wrangling and debate – but ultimately the provision requires that public company boards have at least one person who has expertise in accounting and financial reporting such that the Board member is able to cipher and at the very least flag financial reporting that may appear problematic.[147]

Finally, the Sarbanes Oxley Act addressed the issue of the public accountants. In the situation with Enron, their public accountants, Arthur Andersen and Company were

---

[145] **Title III: Corporate Responsibility -**
(Sec. 302) Instructs the SEC to promulgate requirements that the principal executive officer and principal financial officer certify the following in periodic financial reports: (1) the report does not contain untrue statements or material omissions; (2) the financial statements fairly present, in all material respects, the financial condition and results of operations; and (3) such officers are responsible for internal controls designed to ensure that they receive material information regarding the issuer and consolidated subsidiaries, https://www.congress.gov/bill/107th-congress/house-bill/3763.

[146] H. Josef Hebert, Lay Refuses to Testify to Congress, Assoc. Press., (Feb. 12, 2002), https://apnews.com/article/c0a8f3a6a61e474e18bdd52e4b408030.

[147] *SECURITIES AND EXCHANGE COMMISSION, 17 CFR PARTS 228, 229 and 249, [RELEASE NOS. 33-8177; 34-47235; File No. S7-40-02] RIN 3235-AI66, Disclosure Required by Sections 406 and 407 of the Sarbanes-Oxley Act of 2002* https://www.sec.gov/rules/final/33-8177 htm. *See also* Lawrence J. Trautman, *Who Qualifies as an Audit Committee Financial Expert Under SEC Regulations and NYSE Rules?*, 11 DEPAUL BUS. & COMM. L.J. 205 (2013), http://www.ssrn.com/abstract=2137747.

considered the gold standard in public accounting at the time.[148] But instead of the accountants pushing back on Enron's aggressive and improper accounting practices, Arthur Andersen acquiesced to what Enron wanted to report. When the relationship between Enron and Arthur Andersen was examined, some things were deemed problematic about the relationship. Most noteworthy was the fact that in addition to performing audit services for Enron, Arthur Andersen acted as consultants as well. For such services, Enron paid Andersen some $52 million annually; roughly $26 million for audit services and another $26 million for consulting services.[149] Prevailing thought at the time was that Andersen's consulting relationship along with the corresponding fees that Enron paid compromised Andersen's objectivity and independence. As a result, the Sarbanes Oxley Act now prohibits public accountants from serving in the dual capacity as both auditor and consultant. It now must be one or the other.[150]

Accordingly, this is the basic backdrop for the SEC's financial reporting regime. As you can see, it relies on a number of actors/gatekeepers if you will. Each must do their part if the SEC's disclosure regime is to operate as intended and in furtherance of its mission of investor protection.

---

[148] Flynn McRoberts, *The Fall of Andersen*, CHI. TRIB. Sept. 1, 2002, https://www.chicagotribune.com/news/chi-0209010315sep01-story.html (last viewed Oct. 10, 2021).

[149] Reed Abelson & Jonathan D. Glater, ***Enron's Collapse: The Auditors; Who's Keeping the Accountants Accountable?***, N.Y. TIMES, (Jan. 15, 2002), https://www.nytimes.com/2002/01/15/business/enron-s-collapse-the-auditors-who-s-keeping-the-accountants-accountable.html.

[150] Title II: Auditor Independence - Amends the Securities Exchange Act of 1934 to prohibit an auditor from performing specified non-audit services contemporaneously with an audit (auditor independence). Requires preapproval by the audit committee of the issuer for those non-audit services that are not expressly forbidden by this Act. (Sec. 202) Mandates: (1) preapproval by the audit committee of the issuer of all auditing and non-auditing services provided by an auditor; and (2) disclosure of such preapproval in periodic reports to investors. (Sec. 203) Mandates: (1) audit partner rotation on a five-year basis; and (2) auditor reports to audit committees of the issuer. https://www.congress.gov/bill/107th-congress/house-bill/3763.

VI. THE SEC AND ESG

> *"I have asked SEC staff to develop a mandatory climate risk disclosure rule proposal for the Commission's consideration by the end of the year. I think we can bring greater clarity to climate risk disclosures."*
>
> *Gary Gensler*
> *Chairman, Securities and Exchange Commission*
> *July 28, 2021*[151]

An examination of ESG disclosure policy reveals a history of an administrative agency being slow to act. Commissioner Allison Herren Lee expresses her concerns about this controversial oversight when she states during August 2020, "The final rule the majority adopts today… is silent on two critical subjects: diversity and climate risk disclosures. At the proposing stage for this rule, I was encouraged to see that it included the topic of human capital and hoped that heralded a commitment to a meaningful disclosure requirement…"[152] Commissioner Herren Lee warns:

> There is ever-growing recognition of the importance of diversity from all types of investors. Indeed, in one recent petition, investors representing $1.88 trillion in assets under management called for increased corporate transparency regarding workforce diversity. The recent proxy season has demonstrated this intensified shareholder focus on diversity. And large numbers of commenters on this rule proposal emphasized the need for specific diversity disclosure requirements.
>
> What's more, since this rule was proposed, we've seen protests regarding racial injustice that have brought about an unprecedented national conversation on this subject. Investors, corporations, and analysts have all taken note. Indeed, in July of this year, one large rating agency noted that "racial injustice is becoming a material issue that has the potential to change our ESG Evaluations and credit perspectives."
>
> I cannot think of a more timely topic for us to address, but we have declined to do so. The release is entirely silent on diversity and does not even explain why we chose not to include it (internal citations omitted).[153]

---

[151] *See* Gensler, *supra* note 121.
[152] Allison Herren Lee, *supra* note 19.
[153] *Id.*

The Disclosure Disconnect

Writing during 2019, Professor Ruth Jebe provides an excellent description about the disconnect between definitions of "materiality" applied to financial and ESG information.[154] Due to space limitations in this one law review article, we will not attempt to replicate Professor Jebe's work here. However, we will note that this issue was raised by Congressman Andy Barr of Kentucky during Congressional testimony by SEC Chairman Gensler as recently as October 5, 2021.[155]

Request for Public Comments

During early 2021, Acting SEC Chair Allison Herren Lee sought to answer "whether current disclosures adequately inform investors [requesting]… public input from investors, registrants, and other market participants on climate change disclosure."[156] Observing that, "The Securities and Exchange Commission (SEC or Commission) has periodically evaluated its regulation of climate change disclosures within the context of its integrated disclosure system," Chairman Herren Lee states:

> In 2010, the Commission issued an interpretive release that provided guidance to issuers as to how existing disclosure requirements apply to climate change matters. The 2010 Climate Change Guidance noted that, depending on the circumstances, information about climate change-related risks and opportunities might be required in a registrant's disclosures related to its description of business, legal proceedings, risk factors, and management's discussion and analysis of financial condition and results of operations. The release outlined certain ways in which climate change may trigger disclosure obligations under the SEC's rules. It noted

[154] Ruth Jebe, *The Convergence of Financial and ESG Materiality: Taking Sustainability Mainstream*, 56 AM. BUS. L.J. 645 (Fall 2019).
[155] Oversight of the U.S. Securities and Exchange Commission: Wall Street's Cop Is Finally Back on the Beat: Hearing Before the H. Comm. On Fin. Services., 117th Cong. (2021).
[156] Public Input Welcomed on Climate Change Disclosures, Statement by Allison Herren Lee, Acting Chair, Request for Comment on Climate Disclosures, SEC (Mar. 15, 2021), https://www.sec.gov/news/public-statement/lee-climate-change-disclosures (last viewed July 4, 2021).

> legislation and regulations governing climate change, international accords, changes in market demand for goods or services, and physical risks associated with climate change.
>
> Since 2010, investor demand for, and company disclosure of information about, climate change risks, impacts, and opportunities has grown dramatically. Consequently, questions arise about whether climate change disclosures adequately inform investors about known material risks, uncertainties, impacts, and opportunities, and whether greater consistency could be achieved. In May 2020, the SEC Investor Advisory Committee approved recommendations urging the Commission to begin an effort to update reporting requirements for issuers to include material, decision-useful environmental, social, and governance, or ESG factors. In December 2020, the ESG Subcommittee of the SEC Asset Management Advisory Committee issued a preliminary recommendation that the Commission require the adoption of standards by which corporate issuers disclose material ESG risks (internal references omitted).[157]

During March 2021 Acting Chair Allison Herren Lee requested that the SEC staff conduct an evaluation of "disclosure rules with an eye toward facilitating the disclosure of consistent, comparable, and reliable information on climate change."[158] The Commission specifically solicited public comment regarding "disclosure rules and guidance… whether and how they should be modified… include[ing] comments on existing disclosure requirements in Regulation S-K and Regulation S-X (or, for foreign private issuers, Form 20-F), potential new Commission disclosure requirements, and potential new disclosure frameworks that the Commission might adopt or incorporate…"[159] Encouraging the submission of **"**empirical data and other information in support of… comments. Original data from respondents, including academics, data providers, and other organizations… [to] assist in assessing the materiality of climate-related disclosures, and the costs and benefits of different regulatory approaches to

[157] *Id.*
[158] *Id.*
[159] *Id.*

climate disclosure, Acting Chair Allison Herren Lee sets forth the following questions for consideration:[160]

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

[160] *Id.*

Climate Disclosure Standards Board (CDSB)? Are there any specific frameworks that the Commission should consider? If so, which frameworks and why?

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?
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?
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?
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?
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?

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?
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?
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?
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?
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?[161]

Climate and ESG Task Force Announced

Demonstrating the recent focus and priority of ESG, on March 4, 2021 the SEC announced the creation of a Climate and ESG Task Force within the Division of Enforcement.[162] Led by Acting Division of Enforcement Deputy Director Kelly L. Gibson, the new task force is "a Division-wide effort, with 22 members drawn from the

[161] *Id.*
[162] Press Release 2021-42, SEC Announces Enforcement Task Force Focused on Climate and ESG Issues (Mar. 4, 2021), https://www.sec.gov/news/press-release/2021-42 (last viewed July 5, 2021).

SEC's headquarters, regional offices, and Enforcement specialized units."[163] The Commission states:

> Consistent with increasing investor focus and reliance on climate and ESG-related disclosure and investment, the Climate and ESG Task Force will develop initiatives to proactively identify ESG-related misconduct. The task force will also coordinate the effective use of Division resources, including through the use of sophisticated data analysis to mine and assess information across registrants, to identify potential violations.
>
> The initial focus will be to identify any material gaps or misstatements in issuers' disclosure of climate risks under existing rules. The task force will also analyze disclosure and compliance issues relating to investment advisers' and funds' ESG strategies. Its work will complement the agency's other initiatives in this area, including the recent appointment of Satyam Khanna as a Senior Policy Advisor for Climate and ESG. As an integral component of the agency's efforts to address these risks to investors, the task force will work closely with other SEC Divisions and Offices, including the Divisions of Corporation Finance, Investment Management, and Examinations.
>
> "Climate risks and sustainability are critical issues for the investing public and our capital markets," said Acting Chair Allison Herren Lee.[164]

<u>Form N-PX</u>

SEC Chair Gary Gensler observes, "the SEC oversees about 14,000 registered investment advisers with more than 48 million clients and almost $112 trillion in regulatory assets under management… there has been significant growth in the size and number of private funds, in particular private equity and venture capital funds."[165] Among these, "The number of private equity funds has increased by 58 percent over the last five years; the number of VC funds, 110 percent… Technology is rapidly changing. This trend not only creates new opportunities, but also risks for markets and investors. The SEC must grow and evolve with" this dynamic.[166] On September 29, 2021,

---

[163] *Id.*
[164] *Id.*
[165] Gary Gensler, Chairman, SEC, Prepared Remarks Before The Future of Asset Management North America Conference (Sept. 29, 2021).
[166] *Id.*

Chairman Gensler observes, "we have several projects… [including one having] to do with fund naming. We've seen a growing number of funds market themselves as "green," "sustainable," "low-carbon," and so on. I've directed staff to consider… whether funds should disclose the criteria and underlying data they use to make these claims."[167]

SEC Commissioner Caroline A. Crenshaw states, during "2003, the Commission required funds to report annually certain details about how they voted companies' shares on Form N-PX. While this was a good first step, recent academic work has shown that, in its current form, it's too difficult for many investors to find decision useful information"[168] from these filings. Commissioner Crenshaw continues:

> investors are still largely in the dark when it comes to how the funds they own are voting their money. Today's proposal is thoughtfully designed to address many of the gaps under the existing reporting regime. In addition to requiring certain institutional investors to report their votes… the proposed amendments also would standardize the order in which reporting persons disclose existing information, categorize votes, structure and tag the data reported, and make the description of proxy voting issues consistent across multiple filings. This consistency is fundamental to investors' ability, and perhaps will incentivize investors, to assess how their money is voted. In addition, because all funds will be required to follow the same rules of the road, investors will be able to compare and evaluate voting decisions across the entire market of funds vying for their investing dollars.[169]

Of particular interest to those investors interested in ESG issues, Commissioner Allison Herren Lee, observes: "Corporations… owned by shareholders… have a voice in how their companies are run. That voice comes through the voting rights attached to their

---

[167] *Id.*
[168] Caroline A. Crenshaw, Commissioner, SEC, Statrement on N-PX Proposal (Sept. 29, 2021).
[169] *Id.*

shares. Who handles that voting? Largely, investment companies ("funds") and institutional investment managers."[170] Consider:

> As a result, funds and managers wield significant influence at the corporate ballot box. Opinions vary widely about whether to vote for or against specific proxy proposals. That's as it should be; that's how corporate democracy works. In fact, it's that divergence of views that makes transparency around how votes are cast all the more important. That is what today's proposal is about.
>
> The Commission proposes today the most meaningful improvements to the disclosure of fund voting information since the requirement to disclose was first adopted nearly 20 years ago. Today's proposal would also implement a long overdue Dodd-Frank mandate for institutional investment managers to disclose their say-on-pay votes by using the same form as funds. I am pleased to support the staff's recommendation today, and I want to thank the teams in both the Division of Investment Management and the Division of Economic and Risk Analysis for their thoughtful work on today's proposal.
>
> The proposal would introduce several important new features to enhance voting disclosure, including requirements for funds and managers to standardize the description of matters voted on, categorize the various types of votes cast, and disclose the required information using structured or electronically "tagged" data for ease of analysis. Each of these proposed new features will bring greater transparency to how intermediaries cast votes on behalf of investors.
>
> I want to briefly highlight two significant aspects of today's proposal. First, the ways in which the proposed disclosure would benefit both investors *and* the public. And second, the importance of structured data in modern markets to achieve true transparency and utility.
>
> Today's proposal requires the disclosure of information that is both in the public interest and for the protection of investors. That is our statutory mandate under both the Investment Company Act and the Securities Exchange Act—the central sources of our authority for this proposal. The Investment Company Act states that we may require disclosure that is "necessary or appropriate in the public interest *or* for the protection of investors." In other words, the statute permits us to serve either goal, and today we serve both. It is critical for investors and the public—academics, policy makers, issuers, and a wide variety of market participants—to understand and evaluate the role of funds and managers in the capital markets. Funds and managers, acting on behalf of their shareholders and clients, have the potential to exercise substantial influence over issuers of all sizes. In fact one recent study finds that just three large fund complexes cast an average of about 25% of the votes at S&P 500 companies, often

[170] Allison Herren Lee, Commissioner, SEC, Shining A Light on Corporate Democracy: Statement on Updates to Form N-PX (Public Statement) (Sept. 29, 2021).

> with the ability to tip the scales on important matters of corporate governance.
>
> Thus, how voting authority is exercised—or, in some cases, not exercised—is unquestionably significant to the investors who rely on intermediaries to vote their investment dollars. And it is unquestionably significant to the broader public in understanding the influence of these intermediaries on our capital markets. I hope we will hear from a broad swath of the public in the comment process on how best to bring this needed transparency.
>
> In service to transparency, I'm also very pleased to see today's proposal will require voting information to be disclosed in a structured, machine-readable format. There are thousands of funds, thousands of public companies and tens of thousands of ballot issues at these companies each proxy season. Voting data is important not just at the micro level—meaning a specific vote on a specific ballot issue at a specific company–but also at the macro level and in various aggregate forms—meaning whether and how funds, fund complexes, and managers vote broadly when it comes to contested issues or certain kinds of public policy proposals and how that voting compares to the voting of others. Structured data will facilitate both types of analyses, and I look forward to feedback from commenters on whether and how we can further improve the proposal in this respect.
>
> Lastly, let me mention one other area where I encourage public comment and that is whether we have landed in the right place with respect to how often votes must be reported. Today's proposal leaves in place the existing annual filing requirement. In light of the potential for funds and managers to collectively cast deciding votes on important ballot issues, does annual reporting provide investors and the public with sufficiently timely information to effectively monitor voting practices? Have advancements in technology—such as the proliferation of structured data and automated voting and reporting platforms—made it easier to report proxy votes on a more timely or frequent basis, whether on Form N-PX or on their own websites?[171]

By January 2022 SEC Chair Gary Gensler reflects upon his first nine months on the job with *The Wall Street Journal* concluding that "the SEC has taken longer than Mr. Gensler originally expected to propose a rule requiring public companies to report more information about the risks they face from climate change."[172] Agencies are required by federal agency law "to seek comments from the public and study a rule's costs and

---

[171] *Id.*

[172] Paul Kiernan, *SEC Chief Pushes to Tighten Rules This Year,* WALL ST. J., Jan. 20, 2022 at A2.

benefits before finalizing major changes, a process that usually takes at least several months. That means 2022 will be a crucial year for Mr. Gensler to implement his agenda."[173]

VII. PROXY REVOLT AT EXXON

> *"Over the next six years, we plan to invest more than $15 billion on initiatives to lower greenhouse gas emissions. A significant share is focused on scaling up carbon capture and storage, hydrogen and biofuels. Stronger policy further accelerates development and deployment of lower-emission technologies, and would provide ExxonMobil additional investment opportunities to reduce greenhouse gas emissions. The Company's robust research and development process, continued evaluation of emerging technologies, and global collaborations will be key to identifying and growing lower-emission opportunities."*
>
> *Executive Summary*
> *The Advancing Climate Solutions –*
> *Exxon 2022 Progress Report*[174]

On May 28, 2021, *The New York Times* reports, "The growing urgency to address climate change and concerns about the financial performance of Exxon Mobile aligned this week to help activist investors place two directors on the company's board."[175] We learn "Big Oil was dealt a stunning defeat… when shareholders of Exxon Mobile elected

173 *Id. See also* Neal Newman & Lawrence J. Trautman, Securities Law: Overview and Contemporary Issues, 16 OHIO ST. BUS. L.J. 149 (2021), http://ssrn.com/abstract=3790804; Neal Newman & Lawrence J. Trautman, Special Purpose Acquisition Companies (SPACs) and the SEC, 24 U. PA. J. BUS. L. (forthcoming), http://ssrn.com/abstract=3905372; Lawrence J. Trautman, & George P. Michaely, Jr., *The SEC & The Internet: Regulating the Web of Deceit*, 68 CONSUMER FIN. L. Q. RPT. 262 (2014), http://www.ssrn.com/abstract=1951148; Lawrence J. Trautman & Neal Newman, A Proposed SEC Cyber Data Disclosure Advisory Commission, SEC. REG. L.J (forthcoming), http://ssrn.com/abstract=4097138. *But see* Letter signed by 131 members of U.S. Congress in response to request for comment Fole No. S7-10-22, the Enhancement and Standardization of Climate-Related Disclosures for Investors (June 15, 2022)(contending that proposal "far exceeds the SEC's authority, jurisdiction, and expertise).

174 Advancing Climate Solutions, 2022 Progress Report, Exxonmobil, https://corporate.exxonmobil.com/Climate-solutions/Advancing-climate-solutions-progress-report.

175 Peter Eavis & Clifford Krauss, *Activists on Exxon Board Face Slow Pace of Change*, N.Y. TIMES, May 28, 2021 at B1.

at least two board candidates nominated by activist investors who pledged to steer the company toward cleaner energy and away from oil and gas."[176] Consider:

> The success of the campaign, led by a tiny hedge fund against the nation's largest oil company, could force the energy industry to confront climate change and embolden Wall Street investment firms that are prioritizing the issue. Analysts could not recall another time that Exxon management had lost a vote against company-picked directors…[177]

In many respects, the Exxon proxy battle is the poster child illustrating how the institutional investor community has rapidly grown to embrace the importance of ESG investing during the 2021 proxy season. We will now focus our attention toward a discussion of recent behavioral changes by these important investors. Just several months later, Third Point activist investor Daniel S. Loeb acquired about a $750 million position in Royal Dutch Shell and is recommending breaking the company into "multiple stand-alone companies."[178] Mr. Loeb states, "pursuing a strategy like the one he suggested might lead to a reduction in carbon dioxide emissions and increased shareholder returns, 'a win for all stakeholders.'"[179]

By August 2021, *The Wall Street Journal* reports, "Exxon Mobile Corp. is considering a pledge to reduce its net carbon emissions to zero by 2050… in what would amount to a significant strategic shift by the oil company."[180] The, during January 2022, *The New York Times* writes, "Exxon Mobil, under increasing pressure from investors to

---

[176] Clifford Krauss & Peter Eavis, *Activists Win Battle to Join Exxon's Board,* N.Y. TIMES, May 27, 2021 at A1.
[177] *Id.*
[178] Stanley Reed, *Activist Investor Wants Shell to be Broken Up,* N.Y. TIMES, Oct. 29, 2021 at B3.
[179] *Id.*
[180] Christopher M. Matthews & Emily Glazer, *Exxon Weighs 'Net-Zero' Carbon by 2050*, WALL ST. J., Aug. 6, 2021 at A1.

address climate change, announced… that it had the 'ambition' to reach zero net greenhouse gas emissions from its operations by 2050."[181]

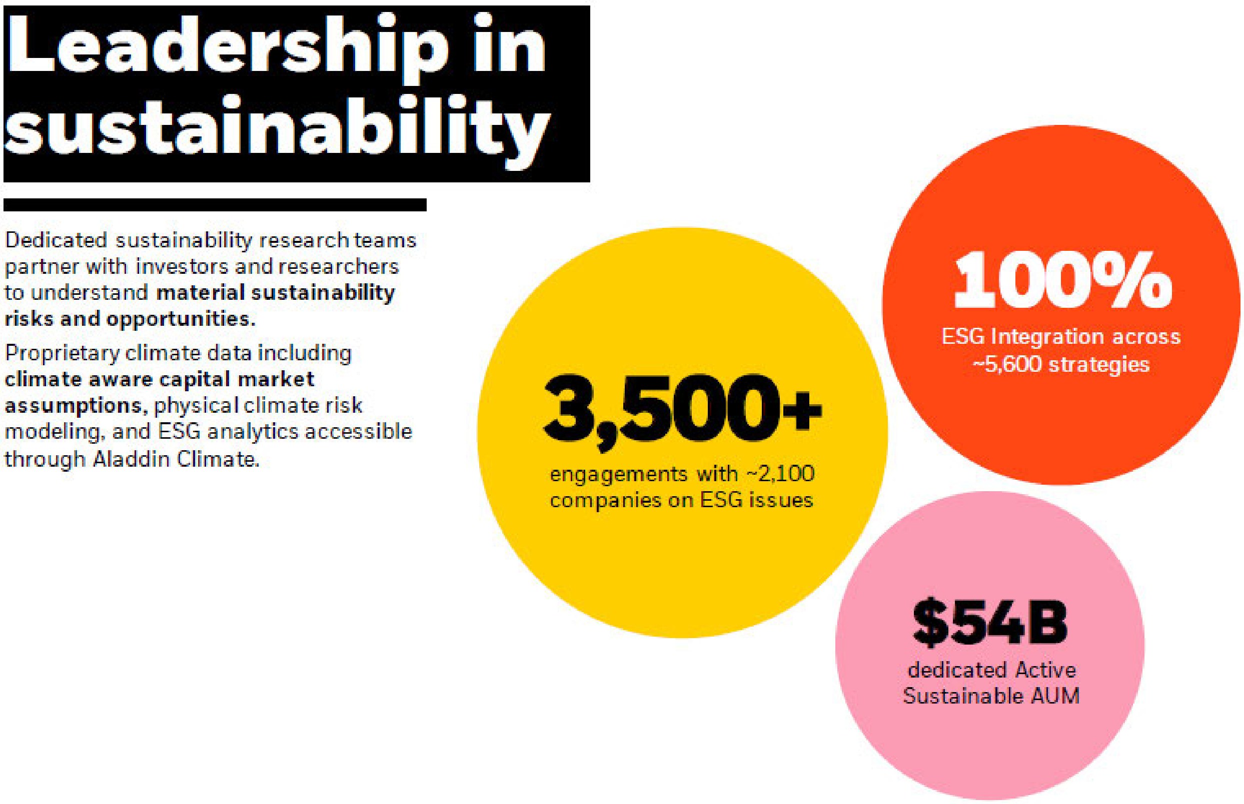
Institutional Investor Impact

What better place to start our examination of ESG institutional investor behavior than to look at the largest, BlackRock, having $8.7 trillion of assets under management. *The New York Times* states that BlackRock "doesn't directly own most of the shares or bonds it buys — it manages them for pension funds, other corporations and individual investors… [Because] most of its investment products track indexes like the S&P 500… it inevitably ends up managing stocks of fossil fuel companies."[182] Journalists further report that, "in response to questions from the New York Times, a BlackRock spokesman said for the first time that the company's 'ambition' was to have 'net zero emissions across our entire assets under management by 2050."[183] Courtesy of the BlackRock Investor Day 2021 presentation, Exhibit 4 illustrates how BlackRock has focused research team assets toward ESG objectives.

---

181 Clifford Krauss, *Exxon Sets Climate Goal of Net Zero In 28 Years,* N.Y. TIMES, Jan. 19, 2022 at B1.
182 Peter Eavis & Clifford Krauss, *The Climate Talk vs. the Walk,* N.Y. TIMES, Feb. 23, 2021 at B1.
183 *Id.*

Exhibit 4
BlackRock Leadership in Sustainability[184]

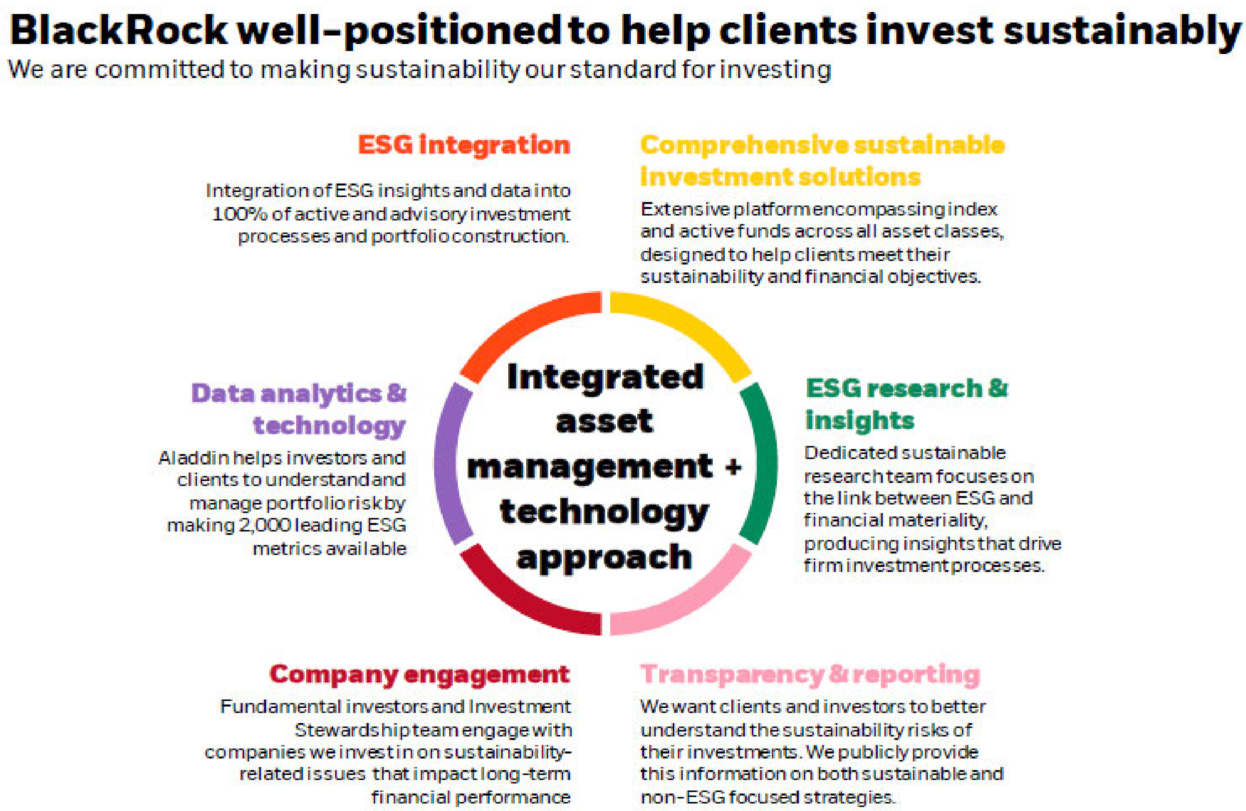


In his 2021 letter to CEOs, BlackRock Chief Executive Laurence Fink writes, "There is no company whose business model won't be profoundly affected by the transition to a net zero economy — one that emits no more carbon dioxide than it removes from the atmosphere by 2050, the scientifically-established threshold necessary to keep global warming well below 2°C."[185] Mr. Fink depicts the following scenario where, "As the transition accelerates, companies with a well-articulated long-term strategy, and a clear plan to address the transition to net zero, will distinguish themselves with their stakeholders — with customers, policymakers, employees and shareholders —

[184] BlackRock, Inc. 2021 Investor Day, Archived Events & Presentations, BlackRock (June 10, 2021), https://s24.q4cdn.com/856567660/files/doc_presentations/2021/06/Investor-Day-Slides-Master-vF.pdf (last viewed Jan. 31, 2022).
[185] *See* Fink, *supra* note 12.

by inspiring confidence that they can navigate this global transformation."[186] However, "companies that are not quickly preparing themselves will see their businesses and valuations suffer, as these same stakeholders lose confidence that those companies can adapt their business models to the dramatic changes that are coming."[187] Exhibit 5 presents BlackRock's case that they are well-positioned to help clients invest in sustainability.

Exhibit 5
BlackRock Well-Positioned to Help Clients Invest in Sustainability[188]

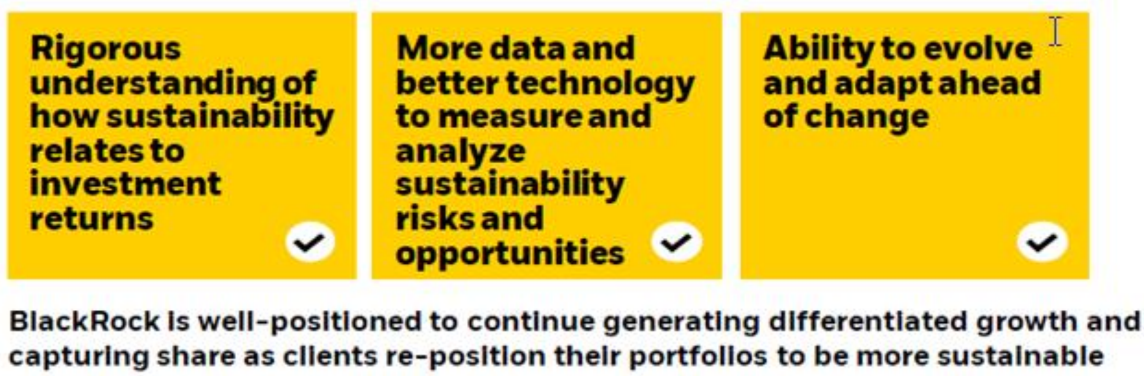


BlackRock Chief Executive Fink cautions that the race to defeat adverse and irreversible climate change consequences will require that the entire global economy undergo transformation. He warns, "Scientists agree that in order to meet the Paris

[186] *Id.*
[187] *Id.*
[188] BlackRock, Inc. 2021 Investor Day, Archived Events, *supra* note 184.

Agreement goal of containing global warming to 'well below 2 degrees above pre-industrial averages' by 2100, human-produced emissions need to decline by 8-10% annually between 2020 and 2050 and achieve 'net-zero' by mid-century."[189] Exhibit 6 shows BlackRock's discussion before investors about their future strategy regarding sustainability (ESG).

Exhibit 6
Investing in Sustainability for BlackRock's Future[190]



> The vote reveals the growing power of giant Wall Street firms that manage the 401(k)s and other investments of individuals and businesses to press chief executives to pursue environmental and social goals. Some of these firms are run by executives who say they see climate change as a major threat to the planet.
>
> Exxon's top five shareholders include Vanguard, BlackRock, the world's largest asset manager, and Exxon's second-largest shareholder with a 6.7 percent stake, has cast itself as a leader in efforts to reduce companies' carbon dioxide emissions. This year, BlackRock's chief executive, Laurence D. Fink, said that the Coronavirus pandemic had 'driven us to confront the global threat of climate change more forcefully.' BlackRock backed three of four candidates nominated by the activists. The vote was not fully tabulated at the end of Wednesday, and there were still two seats undecided on the 12-person board. Eight of the people Exxon's management nominated won seats.[191]

---

[189] *See* Fink, *supra* note 12.
[190] BlackRock, Inc. 2021 Investor Day, Archived Events, *supra* note 184.
[191] Clifford Krauss & Peter Eavis, *Activists Win Battle to Join Exxon's Board*, N.Y. TIMES, May 27, 2021 at A1.

VIII. U.S. AND GLOBAL POLITICAL DYNAMICS

> *"We've set ambitious goals of reducing U.S. greenhouse gases emissions by 50 to 52 percent below 2005 levels by 2030. That's a goal line with limiting global warming to 1.5 degrees Celsius. But the math only works if every country does its part and those countries that don't have the wherewithal get the kind of help they need… Developed and developing economies — so many of which are the most vulnerable to the impacts of climate change — have to stand together and hold each other accountable. The United States recognizes that we will meet our duty to support developing countries taking these actions because they are going to need our help."*
>
> *President Joseph Biden*
> *Glasgow, Scotland*
> *November 1, 2021*[192]

During the first few months of the Biden Administration, *The New York Times* reports, "President Biden's next big thing would fuse the rebuilding of America's creaky infrastructure with record spending to fight climate change, a combination that, in scale and scope, represents a huge political shift, even for Democrats who have been in the climate trenches for decades."[193] Of significant importance, "A guiding philosophy of the Biden proposal argues that the future of good jobs is the transition to an economy that no longer churns out carbon dioxide through the burning of coal, oil and gas."[194] Writing about the Biden Administration infrastructure proposals, *The New York Times* reports:

> [A]s currently constructed, accelerating a clean energy transformation underpins nearly every part of the [infrastructure] plan… It includes building electric power lines that can deliver more renewable energy, building electric vehicle charging stations, capping oil and gas wells to reduce emissions, and reclaiming abandoned coal mines. There is money

[192] Remarks by President Biden at the COP26 Event on 'Action and Solidarity: The Critical Decade,' Glasgow, Scotland (Nov. 1, 2021), https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/11/01/remarks-by-president-biden-at-the-cop26-event-on-action-and-solidarity-the-critical-decade/.
[193] Lisa Friedman & Jim Tankersley, *Biden's Big Infrastructure Push Puts Climate Fight at Forefront,* N.Y. TIMES, March 24, 2021 at A1.
[194] *Id.*

> to build a million affordable, energy-efficient housing units and to make existing structures more energy efficient. Hundreds of billions of dollars would go toward 'high-growth industries of the future,' such as advanced battery manufacturing.
>
> The underlying message — that the next step of America's economic recovery is fundamentally tied to countering the climate crisis — is a major pivot in how Democrats make the case for tackling global warming. No longer merely an environmental imperative like saving the polar bears, or side element of a stimulus package as it was for the Obama administration, climate change has become the centerpiece.
>
> Administration officials say they view averting catastrophic warming and pursuing American dominance of the emerging global industries as inseparable. That is a sharp break from even the most recent Democratic administration, when Mr. Biden was vice president, let alone the Trump era, when the president denied the existence of climate change.[195]

By July 2021, political realities cause a reassessment of the "The American Jobs Plan that Mr. Biden unveiled in March [which] included $330 billion in new spending that the administration promised would replace every lead drinking pipe in America, connect every home to high-speed internet and build 500,000 charging stations for electric cars and trucks."[196] However, political realities result in producing legislation that "contains few of the ambitious ideas that Mr. Biden initially proposed to cut the fossil fuel pollution that is driving climate change."[197] President Biden "had hoped to use a sweeping infrastructure bill as a vehicle to enact a national 'clean electricity standard' requiring power companies to gradually ratchet up the amount of electricity they generate from wind, solar and other sources until they're no longer emitting carbon dioxide."[198] However political stalemate means these proposals are "not included in the bipartisan

[195] *Id.*
[196] Jim Tankersley & Michael D. Shear, *Despite Compromise on Economy, Biden Says He'll Do More With Less,* N.Y. TIMES, July 8, 2021 at A15.
[197] Coral Davenport & Lisa Friedman, *Compromise Leaves Out Far-Reaching Proposals To Fight Climate Change,* N.Y. TIMES, June 25, 2021 at A14.
[198] *Id.*

bill, nor are the hundreds of billions of dollars in spending on tax incentives for wind, solar and other clean energy."[199]

During the 2020s, the political reality of a deeply divided United States presents a major challenge to achieving necessary policy change. Climate deniers and fossil fuel economic interests desiring to push the costs of their environmental abuse onto the public push to do little or nothing to clean our environment ― while environmentalists and those who simply want their children to have a survivable environment advocate for immediate carbon reduction. In his prepared remarks to the COP26 climate conference in Glasgow during November 2021, President Biden states to the rest of the world, "I do apologize for the fact the United States, in the last administration, pulled out of the Paris Accords and put us sort of behind the eight ball a little bit."[200]

A reassessment of the political climate and Congressional negotiations means "The compromise agreement that Mr. Biden struck with centrist senators last month would still accomplish all of those goals, White House officials insist ― even though it spends only about 40 percent of what Mr. Biden initially proposed for broadband, electric vehicles and water infrastructure."[201] *The New York Times* reports President Biden's:

> [O]bjective in the weeks to come will be to pack as much of that agenda as possible into a pair of bills that are unlikely to spend as much as he wants, with his economic legacy hanging on the choices he and congressional leaders make…
>
> In order to reach a $579 billion consensus framework with a group of senators that included five Republicans, Mr. Biden agreed to drop entire planks of the first half of his agenda, the jobs plan, including housing and home health care. He also lost about a third of his proposed spending in areas like roads, bridges and broadband.

---

[199] *Id.*
[200] *See* Remarks by President Biden at the COP26, *supra* note 192.
[201] Jim Tankersley & Michael D. Shear, *Despite Compromise on Economy, Biden Says He'll Do More With Less,* N.Y. TIMES, July 8, 2021 at A15.

> Some of those dropped items could resurface in a second economic package that Mr. Biden is negotiating: a plan to bundle as much as possible of the remainder of the president's $4 trillion agenda into a bill passed entirely with Democratic votes. Along with housing and health care, that bill could include Mr. Biden's proposals for childcare, education and poverty, along with some additional efforts to reduce the emissions that cause climate change…
>
> Mr. Biden has repeatedly said he had to make difficult choices on physical infrastructure and settle for a deal that falls well short of his ambitions… The American Jobs Plan would have spent $174 billion to help the United States support a rapid acceleration in electric vehicle production and usage, including the 500,000 charging stations that have been a favorite Biden talking point going back to the presidential campaign.
>
> The bipartisan agreement contains less than one-tenth as much spending on electric vehicles, which many Republicans say do not fit the traditional definition of infrastructure. White House officials say there is $7.5 billion in the agreement for federal grants to build charging stations across the country, and another $7.5 billion in a new financing tool that will generate loans and public-private partnerships to support charging stations.[202]

Climate Crisis Executive Order

During his first few weeks in office, President Biden issues his Executive Order on Tackling the Climate Crisis at Home and Abroad, observing, "Domestic action must go hand in hand with United States international leadership, aimed at significantly enhancing global action. Together, we must listen to science and meet the moment."[203] A statement from the White House intent upon "restoring scientific integrity and evidence-based policymaking across the federal government, and re-establishing the President's Council of Advisors on Science and Technology."[204] This action may be considered a

---

[202] *Id.*

[203] The White House, *Executive Order on Tackling the Climate Crisis at Home and Abroad* (Jan 27, 2021), https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/ (last viewed Jan. 31, 2022).

[204] Press Release, FACT SHEET: President Biden Takes Executive Actions to Tackle the Climate Crisis at Home and Abroad, Create Jobs, and Restore Scientific Integrity Across Federal Government (Jan. 27, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/01/27/fact-sheet-president-biden-takes-executive-actions-to-tackle-the-climate-crisis-at-home-and-abroad-create-jobs-and-restore-scientific-integrity-across-federal-government/ (last viewed Jan. 31, 2022).

first step in fulfilling the president's "promise to take aggressive action to tackle climate change and build on the executive actions that the President took on his first day in office, including rejoining the Paris Agreement and immediate review of harmful rollbacks of standards that protect our air, water, and communities."[205] In sum:

> President Biden set ambitious goals that will ensure America and the world can meet the urgent demands of the climate crisis, while empowering American workers and businesses to lead a clean energy revolution that achieves a carbon pollution-free power sector by 2035 and puts the United States on an irreversible path to a net-zero economy by 2050. Today's actions advance those goals and ensure that we are tapping into the talent, grit, and innovation of American workers, revitalizing the U.S. energy sector, conserving our natural resources and leveraging them to help drive our nation toward a clean energy future, creating well-paying jobs with the opportunity to join a union, and delivering justice for communities who have been subjected to environmental harm.[206]

Global Carbon Concerns

By now it seems safe to assume that energy companies worldwide are encountering carbon related issues. For example, during June 2021, *The Wall Street Journal* reports "Royal Dutch Shell PLC said it would accelerate its efforts to cut its carbon emissions in the wake of a Dutch court ruling last month ordering the oil giant to take more drastic action."[207] Chief Executive Ben van Beurden posted to LinkedIn that "Shell disagreed with the ruling and still expected to appeal the court's order to curb emissions by 45% by 2030, but nonetheless would rise to the challenge of doing more."[208]

---

[205] *Id.*
[206] *Id.*
[207] Sarah McFarlane, *Shell to Speed Cuts in Emissions,* WALL ST. J., June 10, 2021 at B1.
[208] *Id.*

G20 and UN Climate Framework

The late October 2021 meeting of the G20 in Rome found a focus and concern for global climate issues.[209] *The Wall Street Journal* reports, "Leaders from the Group of 20 major economies are split over phasing out coal and limiting global warming to 1.5 degrees Celsius, officials said, throwing into doubt whether ambitious climate-change targets can be hit."[210] Just days later, the November 1, 2021 remarks of António Guterres, UN Secretary-General in Glasgow, United Kingdom at the twenty-sixth Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) stress our global survival crisis:

> The six years since the Paris Agreement [on climate change] have been the six hottest years on record. Our addiction to fossil fuels is pushing humanity to the brink. We face a stark choice: either we stop it — or it stops us.
>
> It's time to say "enough". Enough of brutalizing biodiversity. Enough of killing ourselves with carbon. Enough of treating nature like a toilet. Enough of burning and drilling and mining our way deeper. We are digging our own graves.
>
> Our planet is changing before our eyes — from the ocean depths to mountain tops; from melting glaciers to relentless extreme weather events. Sea-level rise is double the rate it was 30 years ago. Oceans are hotter than ever — and getting warmer faster. Parts of the Amazon rainforest now emit more carbon than they absorb. Recent climate action announcements might give the impression that we are on track to turn things around.
>
> This is an illusion. The last published report on nationally determined contributions showed that they would still condemn the world to a calamitous 2.7°C increase. And even if the recent pledges were clear and credible — and there are serious questions about some of them — we are still careening towards climate catastrophe.
>
> Even in the best-case scenario, temperatures will rise well above 2°C. So, as we open this much anticipated climate conference, we are still heading for climate disaster. Young people know it. Every country sees it. Small island developing States — and other vulnerable ones — live it. For them, failure is not an option. Failure is a death sentence.

---

[209] Sha Hua & Max Colchester, *Coal Use Stirs Clash At Climate Summit*, WALL ST. J., Oct. 30-31, 2021 at A1.
[210] *Id.*

We face a moment of truth. We are fast approaching tipping points that will trigger escalating feedback loops of global heating. But, investing in the net-zero, climate resilient economy will create feedback loops of its own — virtuous circles of sustainable growth, jobs and opportunity.

We have progress to build upon. A number of countries have made credible commitments to net-zero emissions by mid-century. Many have pulled the plug on international financing of coal. Over 700 cities are leading the way to carbon neutrality. The private sector is waking up. The Net-Zero Asset Owners Alliance — the gold standard for credible commitments and transparent targets — is managing $10 trillion in assets and catalysing change across industries. The climate action army — led by young people — is unstoppable. They are larger. They are louder. And I assure you, they are not going away. I stand with them.

The science is clear. We know what to do. First, we must keep the goal of 1.5°C alive. This requires greater ambition on mitigation and immediate concrete action to reduce global emissions by 45 per cent by 2030. G20 [Group of 20] countries have a particular responsibility as they represent around 80 per cent of emissions.

According to the principle of common but differentiated responsibilities in light of national circumstances, developed countries must lead the effort. But, emerging economies, too, must go the extra mile, as their contribution is essential for the effective reduction of emissions. We need maximum ambition — from all countries on all fronts — to make Glasgow a success.

I urge developed countries and emerging economies to build coalitions to create the financial and technological conditions to accelerate the decarbonization of the economy, as well as the phase-out of coal. These coalitions are meant to support the large emitters that face more difficulties in the transition from grey to green for them to be able to do it.

Let’s have no illusions: if commitments fall short by the end of this COP, countries must revisit their national climate plans and policies. Not every five years. Every year. Every moment. Until keeping to 1.5°C is assured. Until subsidies to fossil fuels end. Until there is a price on carbon. Until coal is phased out. But, we also need greater clarity.

There is a deficit of credibility and a surplus of confusion over emissions reductions and net zero targets, with different meanings and different metrics. That is why — beyond the mechanisms already established in the Paris Agreement — I am announcing today that I will establish a Group of Experts to propose clear standards to measure and analyze net-zero commitments from non-State actors.

Second, we must do more to protect vulnerable communities from the clear and present dangers of climate change. Over the last decade, nearly 4 billion people suffered climate-related disasters. That devastation will only grow. But, adaptation works. Early warning systems save lives. Climate-smart agriculture and infrastructure save jobs. All donors must

> allocate half their climate finance to adaptation. Public and multilateral development banks should start as soon as possible.
>
> Third, this COP must be a moment of solidarity. The $100 billion a year climate finance commitment in support of developing countries must become a $100 billion climate finance reality. This is critical to restoring trust and credibility. I welcome the efforts led by Canada and Germany to help us get there. It is an important first step — but it delays the largest support for years, and it does not give clear guarantees.
>
> But, beyond the $100 billion, developing countries need far greater resources to fight COVID-19, to build resilience and pursue sustainable development. Those suffering the most — namely, least developed countries and small island developing States — need urgent funding. More public climate finance. More overseas development aid. More grants. Easier access to funding. And multilateral development banks must work much more seriously at mobilizing greater investment through blended and private finance.
>
> The sirens are sounding. Our planet is talking to us and telling us something. And so are people everywhere. Climate action tops the list of people's concerns, across countries, age and gender. We must listen — and we must act — and we must choose wisely. On behalf of this and future generations, I urge you: choose ambition. Choose solidarity. Choose to safeguard our future and save humanity…[211]

The Carbon Tax Debate

During recent years, a brisk debate has transpired regarding the use of carbon tax as a mechanism to reduce carbon emissions.[212] Former climate change adviser to President Obama, John Podesta, states "Biden never made a carbon tax the center of his proposal… I think he believed that the combination of investments and standards with a focus on equity was a winning formula both for the economy and was more politically viable."[213] During spring 2021, the Biden administration infrastructure plan:

---

[211] We're Digging Our Own Graves by Burning, Drilling, Mining Deeper, Warns Secretary-General in Stark Message to World Leaders, as COP 26 Begins, Remarks of UN Secretary-General António Guterres, Glasgow (Nov. 1, 2021). *See also* Somini Sengupta, *Colossal Stakes As Leaders Meet To Talk Climate*, N.Y. TIMES, Oct. 31, 2021 at A1.

[212] *See* Reuven S. Avi-Yonah & David M. Uhlmann, *Combating Global Climate Change: Why a Carbon Tax is a Better Response to Global Warming than Cap and Trade*, 28 STAN. ENVTL. L.J. (2009), https://ssrn.com/abstract=1333673; Shi-Ling Hsu, Nine Reasons to Adopt a Carbon Tax (May 17, 2009), https://ssrn.com/abstract=1405944.

[213] Lisa Friedman & Jim Tankersley, *Biden's Big Infrastructure Push Puts Climate Fight at Forefront,* N.Y. TIMES, March 24, 2021 at A1.

> excludes the one thing that economists agree is the most efficient way to draw down planet-warming emissions: taxing or otherwise putting a price on the carbon dioxide emissions that cause it. Instead of a gasoline tax, for instance, the president plans to greatly raise fuel efficiency standards for cars, forcing automakers toward electric vehicles through regulation, not legislation. Similarly, Mr. Biden plans to reimpose strict emissions regulations on electric power plants to move the sector away from coal.[214]

During early 2022, *The New York Times* reports that President Biden's proposed "Build Back Better Act, which contains $555 billion in proposed climate action, is in limbo on Capitol Hill… And the midterm elections loom in November, threatening his party's control of Congress."[215] Frustration grew with the clock ticking toward midterm elections, "A growing number of Democrats in Congress want[ed] to move ahead with the climate portion of President Biden's stalled spending bill, saying the urgency of a warming planet demands action."[216] Then, global political events changed everything.

<u>Russian Invasion of Ukraine</u>

On February 24, 2022, Russia's Ukraine invasion brought pervasive misery during the weeks that followed as "destruction and deprivation [impacted] Ukraine, and the toll of the West's tightening vise grip on Russia's economy" is felt.[217] While the United States has encountered a disfunctional relationship during recent years with both Russia and Ukraine,[218] now, "War and politics are complicating the efforts of the two biggest polluters in history — the United States and Europe — to slow down global

---

214 *Id.*

215 Lisa Friedman, *As Challenges Mount, Biden's Climate Legacy Races Against Clock*, N.Y. TIMES, Jan. 5, 2022 at A15.

216 Coral Davenport & Lisa Friedman, *Some Democrats Work to rescue Biden's Climate-Change Policies*, N.Y. TIMES, Jan. 21, 2022 at A1.

217 Richard Pérez-Pena, *Hospital Hit As Attacks on Civilians Grow: Russia Strikes Maternity Center; Many Trapped in Besieged Cities*, N.Y. TIMES, Mar. 10, 2022 at A1.

218 *See* Lawrence J. Trautman, *Impeachment, Donald Trump and The Attempted Extortion of Ukraine*, 40 PACE L. REV. 141 (2020), http://ssrn.com/abstract=3518082; Lawrence J. Trautman, *Democracy At Risk: Domestic Terrorism and Attack on the U.S. Capitol*, 45 SEATTLE U. L. REV. (forthcoming).

warming, just as scientists warn of intensifying hazards."[219] War in Ukraine has resulted in "President Biden barely ma[king] a mention of his climate goals in the State of the Union speech despite promises to make climate an issue that drives his presidency."[220] *The New York Times* writes:

> As the world reels from spikes in oil and gas prices, the fallout from Russia's invasion of Ukraine has laid bare a dilemma: Nations remain extraordinarily dependent on fossil fuels and are struggling to shore up supplies precisely at a moment when scientists say the world must slash its use of oil, gas and coal to avert irrevocable damage to the planet.[221]

With hostilities still underway as of this writing, "for now, many governments are more urgently focused on alleviating near-term energy shocks, aiming to boost global oil production to replace the millions of barrels per day that Russia has historically exported but which is now being shunned by Western nations."[222] An unfortunate result is that, "one especially spurned commodity — coal — [is] enjoying a renaissance as European countries look again at the dirty fuel to establish energy independence from Russia."[223] In the United States, "American oil producers have been slowly increasing output in recent months, while adding scores of new rigs to drill for oil and natural gas, especially in the Permian Basin straddling Texas and New Mexico. But oil production remains below 2019 levels preceding the pandemic."[224] In short:

---

[219] Somini Sengupta & Lisa Friedman, *War and Politics Imperil Global Climate Goals*, N.Y. TIMES, Mar. 3, 2022 at A1. *See also* Nidhi Subbaraman, *Climate Threat Worsening, Panel Says*, Wall St. J., Mar. 1, 2022;Brad Plumer, Raymond Zhong & Lisa Friedman, *Time is Running Out to Fix Climate, Report Says*, N.Y. TIMES, Mar. 1, 2022 at A1; Raymond Zhong, *The Climate is Worsening. No One Is Listening. Scientists May Strike.*, N.Y. TIMES, Mar. 2, 2022 at A13.
[220] *Id.*
[221] Brad Plumer, Lisa Friedman & David Gelles, *Energy Crunch Spurs Push for Fossil Fuels, but Climate Clock Is Ticking*, N.Y. TIMES, Mar. 11, 2022 at A9.
[222] *Id.*
[223] Rhiannon Hoyle & Joe Wallace, *Unloved Coal Enjoys a Resurgence*, WALL ST. J., Mar. 5-6, 2022 at B11.
[224] Catie Edmonson & Clifford Krauss, *Lawmakers Push to Ban Russian Oil From U.S.*, N.Y. TIMES, Mar. 4, 2022 at A16.

> American producers have doubled their output over the last decade with shale fields around the country and drilling in the Gulf of Mexico. But they reduced investment as the pandemic undercut energy demand, concerns over climate change grew, and investors demanded that the companies return more cash to shareholders…
>
> Roughly 4,000 wells have been drilled but not yet completed with hydraulic fracturing. Halliburton and other service companies are working near capacity and will need months to get to all those wells. For new wells, oil does not begin to flow until six months after a rig is deployed.[225]

Continued stress place on global efforts to curtail adverse climate change can be expected. For example, "Daniel Yergin, the vice chairman of S&P Global and author of the Pulitzer Prize-winning oil history 'The Prize,' said a continued disruption to the flow of Russian oil could lead to an energy crisis on a scale not seen since the 1970s Arab oil embargo."[226]

IX. CONCLUSION

Environmental issues have now risen to a level threatening the very survival of humanity and all living things. The 2022 war in Ukraine and resulting Russian oil embargo has placed new stress upon the worldwide effort to curtail climate change. We believe this discussion of policy issues and recent efforts to address ESG considerations by governmental regulatory agencies adds to this timely dialogue between business, governments and all the peoples of the world. The time for delay has past.

[225] Clifford Krauss, *No Quick Way for Oil Nations To Offset Lost Russian Output,* N.Y. TIMES, Mar. 9, 2022 at A1-11.
[226] Collin Eaton, Joe Wallace & David S. Cloud, *Oil Tops $110 as Global Trade Is Scrambled,* WALL ST. J., Mar. 3, 2022 at A1-13.

