



This article was originally published in *PLI Current: The Journal of PLI Press*, Vol. 7 (2023), <https://plus.pli.edu>. Not for resale.

PLI Current

The Journal of PLI Press

Vol. 7 (2023)

Decarbonization in the Wake of COP 27: The Role of Private Capital

Deborah North

Laura Prosperetti

Laura Daugherty*

Cleary Gottlieb Steen & Hamilton LLP[±]

* The authors thank paralegals Alexia Godron and Jeremy Mauser for their assistance.

± © Cleary Gottlieb Steen & Hamilton LLP, 2023. All rights reserved.

This article was prepared as a service to the *PLI Current: The Journal of PLI Press* to report on recent developments that may be of interest to them. The information in it is therefore general, and should not be considered or relied on as legal advice. Throughout this memorandum, “Cleary Gottlieb” and the “firm” refer to Cleary Gottlieb Steen & Hamilton LLP and its affiliated entities in certain jurisdictions, and the term “offices” includes offices of those affiliated entities.

In November 2022, Egypt hosted the twenty-seventh session of the Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC) in the city of Sharm El-Sheikh.¹ This event, known as COP 27, highlighted the importance of addressing the impacts of climate change through financial commitments from both governments and the private sector. Seen through the lens of decarbonization, the private sector plays a vital role in addressing, and is presented with an opportunity to capitalize on, the themes of COP 27.

This article first explains the general context of COP 27 before proceeding to discuss key takeaways from COP 27 and their relevance for deploying private capital to aid decarbonization using the voluntary carbon markets and other nascent but emerging financial products such as sustainability-linked derivatives (SLDs). These takeaways include a renewed focus on energy security via green policy, the expansion of voluntary carbon markets, the increased role of the private sector and the historic establishment of a “loss and damage” fund for vulnerable countries. While this article primarily focuses on U.S. law and regulation, it also touches on novel and developing EU concepts.

What Is COP 27?

COP 27 marked the thirtieth anniversary of the adoption of the UNFCCC and the establishment of the UNFCCC Secretariat.² The UNFCCC has nearly global membership—197 States and one regional economic integration organization are party to the UNFCCC.³ The UNFCCC Secretariat is tasked with supporting the global response to the threat of climate change.⁴

¹ *COP 27: Agenda*, UNFCCC (Nov. 2022), <https://unfccc.int/event/cop-27>.

² *COP 27*, UNFCCC (Nov. 2022), <https://cop27.eg/#/>; *COP 27*, U.S. Dep’t of State (last visited Dec. 7, 2022), <https://www.state.gov/climate-crisis/cop-27/>.

³ The regional economic integration organization party to the UNFCCC is the European Economic Community. The European Economic Community members are also individually party to the UNFCCC. *See Parties to the United Nations Framework Convention on Climate Change*, UNFCCC (last updated Oct. 25, 2022), <https://unfccc.int/process/parties-non-party-stakeholders/parties-convention-and-observer-states>.

⁴ *About the Secretariat*, UNFCCC (last visited Dec. 7, 2022), <https://unfccc.int/about-us/about-the-secretariat>.

COP, which stands for Conference of the Parties, is the supreme decision-making body of the UNFCCC and is likewise responsible for assessing progress on combatting climate change. Each year, a different city hosts the annual COP.⁵ Beyond representatives of the parties to the UNFCCC and observer States, members of the press, members of the public and representatives of observer organizations—including representatives of the organs and specialized agencies of the United Nations, intergovernmental organizations (IGOs) and non-governmental organizations (NGOs)⁶—also attend each COP.⁷ Over 100 heads-of-state and more than 35,000 participants attended COP 27.⁸

The UNFCCC is the parent treaty to the Paris Agreement. One hundred ninety-six parties adopted the Paris Agreement at COP 21, which was hosted by France in Paris in December 2015.⁹ The Paris Agreement is a legally binding international treaty intended to limit global warming to “well below 2” degrees Celsius compared to preindustrial levels, largely by requiring countries to reduce their greenhouse gas (GHG) emissions.¹⁰ The United States initially signed on to the Paris Agreement in

⁵ *Everything You Wanted to Know About COP But Were Afraid to Ask*, UNFCCC (Oct, 18, 2021), <https://unfccc.int/blog/everything-you-wanted-to-know-about-cop-but-were-afraid-to-ask>.

⁶ The COP must admit IGOs and NGOs before they may send representatives to attend any sessions or meetings of the UNFCCC. *See How to Obtain Observer Status*, UNFCCC (last visited Dec. 7, 2022), <https://unfccc.int/process-and-meetings/parties-non-party-stakeholders/non-party-stakeholders/overview/how-to-obtain-observer-status>.

⁷ *See COP 27*, *supra* note 2.

⁸ *Delivering for People and the Planet*, U.N. (last visited Dec. 7, 2022), <https://www.un.org/en/climatechange/cop27#:~:text=From%206%20to%2020%20November%2C%20COP27%20held%20high%2Dlevel%20and,world%20and%20across%20different%200sectors>.

⁹ *The Paris Agreement*, UNFCCC (last visited Dec. 7, 2022), <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>.

¹⁰ *Id.*; The Paris Agreement art. 2, § 1(a), Dec. 12, 2015, T.I.A.S. No. 16-1104, https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

September 2016 under President Barack Obama.¹¹ However, in June 2017, President Donald Trump announced that the United States would withdraw from the Paris Agreement,¹² and in November 2020, the United States formally withdrew.¹³ The withdrawal, however, was short lived: on the first day of his presidency, President Joe Biden signed the instrument to bring the United States back into the Paris Agreement, and the United States formally rejoined in February 2021.¹⁴

Between Paris and Sharm El-Sheikh, there have been five COPs.¹⁵ The United Kingdom hosted the most recent prior COP, COP 26, in Glasgow, Scotland in October through November of 2021.¹⁶ COP 26 culminated in the Glasgow Climate Pact, which affirmed the Paris Agreement's goal of limiting the global average temperature increase to well below 2°C above pre-industrial levels and pursuing efforts to limit it to 1.5°C. Among other provisions, the Glasgow Climate Pact also 1) included a call to phase down coal power and phase out inefficient fossil fuel subsidies; and 2) reached agreement on the then-pending issues of the "Paris Rulebook," which

¹¹ See Tanya Somanader, *President Obama: The United States Formally Enters the Paris Agreement*, THE WHITE HOUSE: PRESIDENT BARACK OBAMA (Sept. 3, 2016), <https://obamawhitehouse.archives.gov/blog/2016/09/03/president-obama-united-states-formally-enters-paris-agreement>.

¹² See *Statement by President Trump on the Paris Climate Accord*, THE WHITE HOUSE: PRESIDENT DONALD TRUMP (June 1, 2017), <https://trumpwhitehouse.archives.gov/briefings-statements/statement-president-trump-paris-climate-accord/>.

¹³ See Lisa Friedman, *U.S. Quits Paris Climate Agreement: Questions and Answers*, N.Y. TIMES (last updated Jan. 20, 2021), <https://www.nytimes.com/2020/11/04/climate/paris-climate-agreement-trump.html>.

¹⁴ See Antony Blinken, *The United States Officially Rejoins the Paris Agreement*, U.S. Dep't of State (Feb. 19, 2021), <https://www.state.gov/the-united-states-officially-rejoins-the-paris-agreement/>.

¹⁵ *Conference of the Parties (COP)*, UNFCCC (last visited Dec. 7, 2022), <https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop>.

¹⁶ *Glasgow Climate Change Conference – October–November 2021*, UNFCCC (last visited Dec. 7, 2022), <https://unfccc.int/conference/glasgow-climate-change-conference-october-november-2021>.

refers to the rules governing the implementation of the Paris Agreement and includes norms related to carbon markets.¹⁷

Going into COP 27, the Egyptian presidency previewed an “implementation COP,” which would focus on concrete actions to address climate change and prepare for its impacts, in contrast with often pledge-heavy COPs of the past.¹⁸

Energy Security via Green Policy

COP 27 occurred amid a backdrop of increased energy insecurity. The International Energy Agency defines energy security as “the uninterrupted availability of energy sources at an affordable price.”¹⁹ On the one hand, Russia’s invasion of Ukraine and related cut off of natural gas to Europe sent fuel prices soaring and priced many poorer nations out of the market.²⁰ Further, given Russia’s status as a major exporter of crude oil, sanctions against Russia fed into market volatility.²¹ The impact of Russia’s invasion of Ukraine on energy security was an important topic at COP 27. Heads of state including UK Prime Minister Rishi Sunak, French President Emmanuel Macron and U.S. President Joe Biden each reiterated that energy insecurity caused by Russia’s invasion of Ukraine was a reason to bolster, not abandon, climate

¹⁷ *COP26: Together for Our Planet*, U.N. (last visited Dec. 7, 2022),

<https://www.un.org/en/climatechange/cop26>.

¹⁸ See Aruna Chandrasekhar et al., *COP27: Key Outcomes Agreed at the UN Climate Talks in Sharm El-Sheikh*, CARBON BRIEF (Nov. 21, 2022), https://www.carbonbrief.org/cop27-key-outcomes-agreed-at-the-un-climate-talks-in-sharm-el-sheikh/?utm_campaign=Carbon%20Brief%20Daily%20Briefing&utm_content=20221122&utm_medium=email&utm_source=Revue%20Daily.

¹⁹ *Energy Security – Ensuring the Uninterrupted Availability of Energy Sources at an Affordable Price*, IEA (last updated Dec. 2, 2019), <https://www.iea.org/areas-of-work/ensuring-energy-security>.

²⁰ See Mira Rojanasakul, *Europe’s Energy Risks Go Beyond Gas*, N.Y. TIMES (Nov. 17, 2022), <https://www.nytimes.com/interactive/2022/11/17/climate/eu-energy-crisis-gas.html>.

²¹ See, e.g., Arathy Somasekhar, *U.S. Crude Ends Below \$95/bbl as EU Tweaks Russian Oil Sanctions*, REUTERS (July 22, 2022), <https://www.reuters.com/business/energy/oil-prices-steady-after-sharp-declines-weak-us-demand-2022-07-22/>.

change commitments.²² On the other hand, climate change itself threatened energy security in 2022. For example, extreme heat led to blackouts in Pakistan and the Sichuan Province of China, with California narrowly avoiding the same result.²³

Amid this backdrop, and despite current upticks in the use of “dirty fuel” as nations seek stopgap measures,²⁴ energy insecurity appears to be impelling nations to accelerate the transition to low-carbon power. For example, Japan has reinstated its nuclear energy program,²⁵ and Europe has strengthened its plans to increase renewable energy since 2020.²⁶

²² See Chandrasekhar, *supra* note 18. Notably, however, as Carbon Brief reports, “An analysis by the research group Climate Action Tracker released during COP27 found that several regions, including Europe, North America, Africa and Australia, have ramped up new fossil fuel production and infrastructure projects since the war began. If all of these new projects go ahead, they would use up 10% of the world’s remaining ‘carbon budget’ for keeping global warming to 1.5C – the aspiration of the Paris Agreement, according to the analysis.” *Id.* (citing *Massive Gas Expansion Risks Overtaking Positive Climate Policies*, CLIMATE ACTION TRACKER (Nov. 10, 2022), <https://climateactiontracker.org/publications/massive-gas-expansion-risks-overtaking-positive-climate-policies/>).

²³ See Bob Keefe, *The Price of Energy Insecurity*, INTERNATIONAL MONETARY FUND (Dec. 2022), <https://www.imf.org/en/Publications/fandd/issues/2022/12/POV-the-price-of-energy-insecurity-keefe>.

²⁴ See, e.g., *Why the War in Ukraine is Driving Up Europe’s Use of Coal – and Its Price*, THE ECONOMIST (May 9, 2022), <https://www.economist.com/the-economist-explains/2022/05/09/why-the-war-in-ukraine-is-driving-up-europes-use-of-coal-and-its-price>.

²⁵ See Stephen Stapczynski and David Stringer, *Threats of Blackouts Drive Japan to Embrace Nuclear Again*, BLOOMBERG (last updated Aug. 24, 2022), <https://www.bloomberg.com/news/articles/2022-08-24/japan-wants-to-restart-more-reactors-to-avoid-power-shortages#xj4y7vzkg>.

²⁶ See Kate Abnett, *Ukraine War, Pandemic Set to Speed Europe’s Green Energy Transition, Report Finds*, REUTERS (June 1, 2022), <https://www.reuters.com/business/sustainable-business/ukraine-war-pandemic-set-speed-europes-green-energy-transition-report-finds-2022-06-01/>.

In the United States, August 2022 saw the passage of the Inflation Reduction Act, which represents the outcome of the significantly more ambitious Build Back Better bill. This nonetheless far-reaching Act includes provisions to “finance green power, lower costs through tax credits, reduce emissions, and advance environmental justice.”²⁷ In pertinent part, the Act is intended to reduce U.S. carbon emissions by roughly 40% by 2030²⁸ and to reach a net-zero economy by 2050.²⁹ In support of these goals, the Act makes “the single largest investment in climate and energy in American history”³⁰ in the amount of \$369 billion.³¹ While the United States adopted the Inflation Reduction Act prior to COP 27, it nonetheless represents a salvo aimed at combatting energy insecurity through investment in green energy and decarbonization.

Expansion of Voluntary Carbon Markets

Another key topic at COP 27 was the expansion of voluntary carbon markets. Voluntary carbon markets allow carbon emitters to purchase credits that are awarded

²⁷ *The Inflation Reduction Act*, U.S. Env’t Prot. Agency (last visited Dec. 7, 2022), <https://www.epa.gov/green-power-markets/inflation-reduction-act>.

²⁸ *Summary: The Inflation Reduction Act of 2022*, Senate Democrats (last visited Dec. 7, 2022), https://www.democrats.senate.gov/imo/media/doc/inflation_reduction_act_one_page_summary.pdf.

²⁹ *Inflation Reduction Act of 2022*, U.S. Dep’t of Energy (last visited Dec. 7, 2022), <https://www.energy.gov/lpo/inflation-reduction-act-2022>.

³⁰ *Id.*; see also *Statement by Administrator Regan on the Passage of the Inflation Reduction Act of 2022*, U.S. Env’t Prot. Agency (Aug. 12, 2022), <https://www.epa.gov/newsreleases/statement-administrator-regan-passage-inflation-reduction-act-2022>.

³¹ See *Remarks by President Biden At Signing of H.R. 5376, The Inflation Reduction Act of 2022*, THE WHITE HOUSE (Aug. 16, 2022), <https://www.whitehouse.gov/briefing-room/speeches-remarks/2022/08/16/remarks-by-president-biden-at-signing-of-h-r-5376-the-inflation-reduction-act-of-2022>.

to projects that remove or reduce atmospheric carbon to offset their emissions.³² These markets can be distinguished from compliance carbon markets, which is the term for systems where a government or regulator issues a carbon allowance that participants must not exceed unless they can purchase additional carbon allowances from another participant under the cap-and-trade program.³³ Each credit typically corresponds to one metric ton of reduced, avoided or removed carbon dioxide or equivalent GHG. According to the Taskforce on Scaling Voluntary Carbon Markets, voluntary carbon markets need to grow by more than 15-fold by 2030 in order to support the investment required to deliver the Paris Agreement's 1.5°C pathway.³⁴ As the World Economic Forum reported, at COP 27, there was “a welcome sense of urgency about the need to establish carbon credits that are robust, tradeable and insurable, thereby generating reliable sources of revenue that can be channelled [*sic*] back into the financing of mitigation and adaptation efforts.”³⁵

COP 27 was not the first time that voluntary carbon markets were a key topic at a COP. Article 6 of the Paris Agreement sought to establish international cooperation and governance of both the voluntary and compliance carbon markets in order to support countries in meeting their nationally determined contributions (NDCs) for GHG emission reduction. Article 6 aims to provide a voluntary accounting framework and envisions both linking emission-trading schemes across borders to allow for the international transfer of carbon allowances and credits and establishing a central UN mechanism to trade carbon allowances and credits from countries or entities with a

³² *Voluntary Carbon Markets: How They Work, How They're Priced and Who's Involved*, SP GLOBAL (June 10, 2021), <https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/061021-voluntary-carbon-markets-pricing-participants-trading-corsia-credits>.

³³ *Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US*, ISDA (June 2022) at 3, <https://www.isda.org/2022/06/02/voluntary-carbon-markets-analysis-of-regulatory-oversight-in-the-us/>.

³⁴ *Taskforce on Scaling Voluntary Carbon Markets*, TSVC (Jan. 2021) at 4, https://www.iif.com/Portals/1/Files/TSVC_Report.pdf.

³⁵ Huw van Steenis, *Finance Pivots from Risks to the Opportunities of Energy Transition and Decarbonization at COP27*, WORLD ECON. F. (Nov. 18, 2022), <https://www.weforum.org/agenda/2022/11/cop27-finance-energy-security-carbon-markets-transition/>.

surplus to those set to exceed their targets.³⁶ At COP 26 in Glasgow, the Paris Agreement parties finalized the Article 6 Rulebook after prolonged talks, opening the door for countries to rely on the Article 6 framework to utilize the compliance and voluntary carbon markets.³⁷ However, COP 26 deferred several contentious issues, including how to treat emissions removals, whether to allow credits for emissions avoidance and when carbon credits can be revoked. COP 27 in Sharm El-Sheikh therefore saw a reopening of these conversations. The tenor of these negotiations suggested that the voluntary market should strive to shift focus from an offset paradigm to one of financing emissions reductions.³⁸

U.S. Regulatory Interest in the Carbon Markets

Commodity Futures Trading Commission

In the United States, both regulators and the private sector have shown recent interest in the voluntary carbon markets as well. In the derivatives space, the Commodity Futures Trading Commission (CFTC) has become increasingly active. For example, in September 2020, the CFTC's Climate-Related Market Risk Subcommittee of the Market Risk Advisory Committee issued a report titled

³⁶ Deborah North et al., *Global Carbon Markets*, Futures Indus. Ass'n L. & Compliance Div. Conf., 4 (Apr. 28, 2022).

³⁷ *Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US*, *supra* note 33, at 3.

³⁸ See Chandrasekhar, *supra* note 18. Article 6 carbon trading is reportedly unlikely to commence before 2024 at the earliest. The Carbon Brief reports that some observers expressed concern that Article 6 trading might become a “sideshow” to the voluntary carbon markets. *See id.*

*Managing Climate Risk in the U.S. Financial System.*³⁹ The report concludes that climate change poses a major risk to the stability of the U.S. financial system and, in turn, the American economy, and presents fifty-three recommendations to mitigate the risks that climate change poses to the financial markets.⁴⁰

Further, in March 2021, CFTC Acting Chairperson Rostin Behnam established the Climate Risk Unit. The goal of the CFTC’s Climate Risk Unit is to “focus[] on the role of derivatives in understanding, pricing, and addressing climate-related risk and transitioning to a low-carbon economy.”⁴¹

Finally, in June 2022, the CFTC issued a Request for Information (RFI) seeking public comment on climate-related financial risk. The RFI sought responses on questions specific to data, scenario analysis and stress testing, risk management, disclosure, product innovation, voluntary carbon markets, digital assets, greenwashing, financially vulnerable communities and public-private partnerships and engagement. The CFTC indicated that it intends to use the responses to promote responsible innovation, ensure the financial integrity of all transactions subject to the Commodity Exchange Act, avoid systemic risk, inform the CFTC’s response to the recommendations of the Financial Stability Oversight Council 2021 Report on

³⁹ Press Release, Commodity Futures Trading Comm’n, *CFTC’s Climate-Related Market Risk Subcommittee Releases Report* (Sept. 9, 2020),

<https://www.cftc.gov/PressRoom/PressReleases/8234-20>; see also Rostin Behnam et al., *Managing Climate Risk in the U.S. Financial System: Report of the Climate-Related Market Risk Subcommittee, Market Risk Advisory Committee of the U.S. Commodity Futures Trading Commission*, Commodity Futures Trading Comm’n,

<https://www.cftc.gov/sites/default/files/2020-09/9-9-20%20Report%20of%20the%20Subcommittee%20on%20Climate-Related%20Market%20Risk%20-%20Managing%20Climate%20Risk%20in%20the%20U.S.%20Financial%20System%20for%20posting.pdf> (full report).

⁴⁰ *CFTC’s Climate-Related Market Risk Subcommittee Releases Report*, *supra* note 39.

⁴¹ Press Release, Commodity Futures Trading Comm’n, *CFTC Acting Chairman Behnam Establishes New Climate Risk Unit* (Mar. 17, 2021),

<https://www.cftc.gov/PressRoom/PressReleases/8368-21>.

Climate-Related Financial Risk and inform the ongoing work of its Climate Risk Unit.⁴²

Two key comments in response to the RFI include those from the Futures Industry Association (FIA) and from Senator Cory A. Booker, Senator Elizabeth Warren, Senator Edward J. Markey, Senator Richard Blumenthal, Senator Bernard Sanders, Senator Jeffrey A. Merkley and Senator Kirsten Gillibrand.

FIA's comment recognizes "the power of regulated markets to drive price discovery and provide opportunities for risk," while also "encourage[ing] policymakers and regulators, including the CFTC, to allow for continued innovation and growth of nascent and emerging markets and products management that are critically important for the transition to a more sustainable economy."⁴³ FIA cites to the voluntary carbon markets as a prime example of this sort of innovation and emphasizes the importance of regulatory certainty "for robust participation in markets," thus encouraging the CFTC to coordinate with global regulators and standard-setting bodies.⁴⁴ FIA also highlights the role of the market for futures in carbon allowances in setting the price of carbon and encourages the CFTC to monitor developments in the carbon markets, while also voicing its support for the Core Carbon Principles project of the Integrity Council for Voluntary Carbon Market (ICVCM),⁴⁵ which is described in more detail below. Notably, however, FIA discourages the CFTC from establishing a registration framework specific to the voluntary carbon markets, citing the threat to market liquidity.⁴⁶

The Senators' comment "emphasize[s] the risks and integrity challenges of the current voluntary carbon offsets market and . . . urge[s] CFTC to pursue strong

⁴² See Press Release, Commodity Futures Trading Comm'n, *CFTC Releases Request for Information on Climate-Related Financial Risk* (June 2, 2022), <https://www.cftc.gov/PressRoom/PressReleases/8541-22>.

⁴³ Letter from Walt L. Lukken, President & CEO, Futures Industry Ass'n, to Christopher Kirkpatrick, Secretary, Commodity Futures Trading Comm'n (Oct. 7, 2022) at 1, <https://www.fia.org/sites/default/files/2022-10/FIA%20Climate%20RFI%2010.07.22.pdf>.

⁴⁴ See *id.* at 9-10.

⁴⁵ *Id.* at 7.

⁴⁶ *Id.* at 10.

oversight of these markets.”⁴⁷ Taking a markedly different tone than the FIA comment, the Senators’ comment posited that voluntary carbon markets are easily taken advantage of to market credits that have no real additionality (i.e., the principle that a project cannot generate a carbon credit unless its outcome would not have occurred without the financial incentive of the carbon credit) and therefore often benefit wealthy corporations to the detriment of Black, Indigenous and low-income communities.⁴⁸ In conflict with the FIA, the Senators recommend that the CFTC create a registry for carbon offsets, offset brokers and offset registries, among other recommendations.⁴⁹

Notably, there is some debate regarding the scope of the CFTC’s authority to regulate in this space. For example, CFTC Commissioner Summer Mersinger issued a statement expressing concern that the CFTC lacked authority to address many points noted in the RFI, including the impact of climate-related risk on commodities markets (rather than the related derivatives markets), mandating disclosure of climate related data, creating a registry for carbon market participants who are not engaged in activities related to derivatives and regulating digital assets or distributed ledger technology that does not involve derivatives, among other issues.⁵⁰ The CFTC’s future action in the carbon space remains an important area of focus.

Securities and Exchange Commission

The Securities and Exchange Commission (SEC) is also interested in the carbon markets. For example, in March 2022, the SEC proposed sweeping climate risk related

⁴⁷ See Letter from Cory A. Booker et al., to Chairman Rostin Behnam, Commodity Futures Trading Comm’n, Climate-Related Financial Risk RFI [87 FR 34856] (Oct. 13, 2022) at 1, <https://comments.cftc.gov/PublicComments/ViewComment.aspx?id=70907&SearchText=booker>.

⁴⁸ *Id.* at 1-2.

⁴⁹ *Id.* at 2.

⁵⁰ See Press Release, Commodity Futures Trading Comm’n, *Concurring Statement of Commissioner Summer K. Mersinger Regarding Request for Information on Climate-Related Financial Risk* (June 2, 2022), <https://www.cftc.gov/PressRoom/SpeechesTestimony/mersingerstatement060222>.

disclosure and reporting rules.⁵¹ Although issuance of the final rules has been delayed given reactions and challenges to the proposal, the proposed rules call for certain disclosures regarding carbon.

One element of the proposed rule calls for mandatory disclosures by any registrant that “maintains an internal carbon price” of the price per metric ton of carbon dioxide, the total price and how it is estimated to change over time, the rationale for the internal carbon price and how it uses the internal carbon price to evaluate and manage climate-related risks.⁵²

Another aspect of the proposed rule requires any public filer who utilizes carbon offsets⁵³ or renewable energy credits or certificates (RECs)⁵⁴ as part of its net emissions reduction strategy to disclose the role of such carbon offsets or RECs in the registrant’s climate-related business strategy.⁵⁵ These disclosures include the amount of carbon

⁵¹ Press Release, Sec. & Exch. Comm’n *SEC Proposes Rules to Enhance and Standardize Climate-Related Disclosures for Investors*, (Mar. 21, 2022), <https://www.sec.gov/news/press-release/2022-46>; see also Proposed Rule: The Enhancement and Standardization of Climate-Related Disclosures for Investors, Sec. & Exch. Comm’n, Securities Act Release No. 33-11042, Exchange Act Release No. 34-94478 (Mar. 21, 2022), <https://www.sec.gov/rules/proposed/2022/33-11042.pdf> (“Proposed ESG Rules”); see also Press Release, Cleary Gottlieb Steen & Hamilton LLP, *Climate Change Disclosures – Three Deep Dives Into the SEC Proposal* (Apr. 6, 2022), <https://www.clearygottlieb.com/news-and-insights/publication-listing/climate-change-disclosures-three-deep-dives-into-the-sec-proposal>.

⁵² See Press Release, Cleary Gottlieb Steen & Hamilton LLP, *The SEC Climate Disclosure Proposal – Top Ten Issues for Comment* (May 20, 2022), <https://www.clearygottlieb.com/news-and-insights/publication-listing/sec-climate-disclosure-proposal-top-ten-issues-for-comment>; see also Proposed ESG Rules, *supra* note 51 at § 229.1502(e).

⁵³ The proposed rules use carbon offsets to refer to “an emissions reduction or removal of greenhouse gases (‘GHG’) in a manner calculated and traced for the purpose of offsetting an entity’s GHG emissions.” Proposed ESG Rules, *supra* note 51 at § 229.1500(a).

⁵⁴ The proposed rules define an REC as “a credit or certificate representing each megawatt-hour (1 MWh or 1,000 kilowatt-hours) of renewable electricity generated and delivered to a power grid.” *Id.* at § 229.1500(n).

⁵⁵ See *id.* at 77 & §§ 229.1502(b)(6), (d).

reduction represented by the offsets or the amount of generated renewable energy represented by the RECs, the source of the offsets or RECs, a description and location of the underlying projects, any registries or other authentication of the offsets or RECs and the cost of the offsets or RECs.⁵⁶ The proposed rule also encourages registrants to discuss the role of carbon offsets and RECs in meeting climate-related targets or goals.⁵⁷

Comments submitted to the SEC have pushed back on elements of the proposed rule. For example, NASDAQ expressed concern on behalf of its listed companies that many disclosure requirements, including those related to internal carbon pricing and use of carbon offsets and RECs, only apply when the company has first voluntarily adopted an internal target or program. This, in turn, may have a chilling effect on the adoption of such targets and programs as companies may seek to avoid the associated disclosure burdens.⁵⁸ Other commenters highlighted that the information that the SEC seeks regarding internal carbon pricing and use of carbon offsets and RECs is, in some cases, commercially sensitive, proprietary and immaterial.⁵⁹ The SEC's final rules are another important area to watch.

⁵⁶ *Id.* at § 229.1502(d).

⁵⁷ *Id.* at § 229.1502(b)(6).

⁵⁸ See Letter from John A. Zecca, Chief Legal and Regul. Officer, Nasdaq, Inc., to Vanessa A. Countryman, Sec'y, Sec. & Exch. Comm'n, File No. S7-10-22 (June 14, 2022) at 13, <https://www.sec.gov/comments/s7-10-22/s71022-20131426-301608.pdf>; see also Letter from Kenneth E. Bentsen, Jr., President & CEO, Sec. Indus. & Fin. Mkts. Ass'n (SIFMA), to Vanessa A. Countryman, Sec'y, Sec. & Exch. Comm'n, File No. S7-10-22: The Enhancement and Standardization of Climate-Related Disclosures for Investors (June 17, 2022) at 28, <https://www.sec.gov/comments/s7-10-22/s71022-20131615-301991.pdf>.

⁵⁹ See, e.g., Letter from David A. Inchausti, VP & Controller, Chevron Corporation, to Vanessa A. Countryman, Sec'y, Sec. & Exch. Comm'n, Proposing Release – *The Enhancement and Standardization of Climate-Related Disclosures for Investors* (File No. S7-10-22) (June 17, 2022) at 12-13, <https://www.sec.gov/comments/s7-10-22/s71022-20132316-302853.pdf>; Letter from Brian Huseman, VP, Public Policy, Amazon.com, Inc., to Vanessa A. Countryman, Sec'y, Sec. & Exch. Comm'n, S7-10-22 (The Enhancement and Standardization of Climate-Related Disclosures for Investors) (June 17, 2022) at 7-8, <https://www.sec.gov/comments/s7-10-22/s71022-20132266-302794.pdf>.

Carbon Credit Quality and Standardization

A key distinction between the compliance markets that allow for the use of carbon credits where carbon credits are issued and regulated by governmental agencies and regulators and the voluntary carbon markets is the standardization and quality of the carbon credits. The highly heterogenous nature of voluntary carbon credits makes market liquidity difficult to obtain.⁶⁰ Voluntary carbon credits are generated by a variety of projects and sources with different objectives and in different jurisdictions. The variation in voluntary carbon credits is reflected in the different futures contracts offered by exchanges. Not all voluntary carbon credits are created equal. Credits may be “natural,” representing a project like forest preservation, or may represent a different sort of carbon abatement, such as a project to eliminate burning of fossil fuels.⁶¹ Generally, carbon credits may come from four different categories:

- 1) avoided nature loss (such as preventing deforestation);
- 2) nature-based sequestration (such as reforestation);
- 3) avoidance or reduction of emissions (such as methane reduction); and
- 4) technology-based decarbonization of the atmosphere (such as use of carbon capture, utilization and storage (CCUS) technology).⁶²

Different carbon credits may carry different risks. For example, carbon credits based on preventing deforestation or reforestation may be quickly wiped out by phenomena such as wildfires, insects and drought as the forest supporting them is lost.⁶³ These

⁶⁰ Christopher Blaufelder, et al., *A Blueprint for Scaling Voluntary Carbon Markets to Meet the Climate Challenge*, MCKINSEY SUSTAINABILITY (Jan. 29, 2021), <https://www.mckinsey.com/capabilities/sustainability/our-insights/a-blueprint-for-scaling-voluntary-carbon-markets-to-meet-the-climate-challenge>.

⁶¹ See Russell Blinch, *Carbon Markets Driving Price Discovery*, OPEN MKTS. (Oct. 7, 2022), <https://www.cmegroup.com/openmarkets/energy/2022/Carbon-Markets-Driving-Price-Discovery.html>.

⁶² Blaufelder, *supra* note 60.

⁶³ See Craig Welch, *Polluters Are Using Forests as ‘Carbon Offsets.’ Climate Change Has Other Plans.*, NATIONAL GEOGRAPHIC (May 4, 2022), <https://www.nationalgeographic.com/environment/article/forests-as-carbon-offsets-climate-change-has-other-plans>.

factors are priced into the cost of the credit. In some cases, purchasers look for specific types of carbon credits generated by specific projects.

Appropriately pricing carbon offsets is one of the principal challenges that the industry faces.⁶⁴ If the price is too low, carbon credits will not serve the underlying goal of removing GHG emissions from the atmosphere because the market will not incentivize emitters to also strive to reduce their own emissions. On the other hand, if the price is too high, voluntary participation in the markets is less likely.⁶⁵ Spot and futures markets play a key role in pricing the credits,⁶⁶ thus encouraging price stabilization in both the voluntary and compliance markets.⁶⁷

Acknowledgment that decarbonization requires appropriate (and comparable) metrics that do not spawn inverse incentives was a key topic at COP 27, as well as at prior COPs.⁶⁸ This mirrors industry concerns regarding the quality of available carbon credits and the resulting impact on the development of liquid and safe markets. At COP 26, the parties committed to establish new rules on international carbon trading.⁶⁹ This theme continued at COP 27, where the Three Cairns Group and Bloomberg Philanthropies announced a new initiative to form the Global Carbon Trust and the Carbon Storage Governing Council. The goal of the Global Carbon Trust is to supplement the existing carbon markets by offering an effective way to manage the supply and liquidity of high-quality carbon credits through standardized contracts and lowering barriers to entry for emerging economies, among other projects.

⁶⁴ See Blinch, *supra* note 61.

⁶⁵ See North, *supra* note 36, at 6. See also Letter from Cory A. Booker et al., to Chairman Rostin Behnam, *supra* note 47 at 1 (“Several studies have highlighted that carbon offset projects are frequently illegitimate, and those that do contribute to meaningful emissions reductions are often representative of broader ‘pay to pollute’ schemes that place profit over protecting frontline communities.” (citing *Paying to Pollute; The Environmental Injustice of Pollution Trading*, FOOD & WATER WATCH & GREENACTION FOR HEALTH AND ENVIRONMENTAL JUSTICE (2017), https://foodandwaterwatch.org/wp-content/uploads/2021/03/ibsp_1711_ejpaytopollute-webfin2_0.pdf)).

⁶⁶ See Blinch, *supra* note 61.

⁶⁷ See North, *supra* note 36, at 6.

⁶⁸ See, e.g., van Steenis, *supra* note 35.

⁶⁹ See North, *supra* note 36, at 5.

The Carbon Storage Governing Council will include leading subject matter experts and representatives from civil society and academia, and will work with the Global Carbon Trust to represent the interests of society.⁷⁰

In 2021, the Taskforce on Scaling Voluntary Carbon Markets (TSVCM), an organization representing a broad selection and large number of carbon market stakeholders, produced a two-phase report on the main hinderances to voluntary market growth. This report highlighted the lack of high quality standards for carbon credits and a lack of standardized governance in the value chains.⁷¹ In response to its findings in the report, the TSVCM recommended the formation of an umbrella governance body that would develop a set of Core Carbon Principles (CCPs) to promote integrity, liquidity and growth and provide a high standard for the trading and creation of quality carbon credits, among other goals related to standardization of both documentation and legal and accounting rules.⁷² Thus, the TSVCM formed the ICVCM as the independent governance body for the voluntary carbon market.⁷³

The ICVCM has a stated purpose of “ensur[ing] the voluntary carbon market accelerates a just transition to 1.5°C.”⁷⁴ The primary mandate of the ICVCM is to “[e]stablish, host, and curate a set of Core Carbon Principles (CCPs), which will set new threshold standards for high-quality carbon credits and define which carbon-

⁷⁰ Press Release, Bloomberg Philanthropies, *Global Carbon Trust to Develop Necessary Market Infrastructures for Scaling the Voluntary Carbon Markets* (Nov. 8, 2022), <https://www.bloomberg.org/press/global-carbon-trust-to-develop-necessary-market-infrastructure-for-scaling-the-voluntary-carbon-markets/>.

⁷¹ See generally *Phase I Final Report*, TSVCM (Jan. 2021), https://icvcm.org/wp-content/uploads/2022/03/TSVCM_Report.pdf; *Phase II Final Report*, TSVCM (July 8, 2021), https://icvcm.org/wp-content/uploads/2022/03/TSVCM_Phase_2_Report.pdf.

⁷² North, *supra* note 36, at 15.

⁷³ Press Release, INTEGRITY COUNCIL FOR THE VOLUNTARY CARBON MKT., *Governance Body Formed by the Taskforce on Scaling Voluntary Carbon Markets Announces New Leadership, Will Appoint Representatives from Indigenous Groups* (Oct. 29, 2021), <https://icvcm.org/original-press-release-from-tsvcm-on-formation-of-icvcm/>.

⁷⁴ INTEGRITY COUNCIL FOR THE VOLUNTARY CARBON MKT., <https://icvcm.org/>.

crediting programs and methodology types are CCP-eligible.”⁷⁵ In July 2022, the ICVCM launched a sixty-day public comment open to all regarding its draft Core Carbon Principles and Assessment Framework. It expects to issue the final Core Carbon Principles and Assessment Framework in March 2023. The ICVCM plans to continuously improve the CCPs over time, with the first revision process to begin in 2025 for implementation in 2026. The ICVCM also plans to introduce labels enabling buyers to identify high-integrity carbon credits—with integrity evaluated on the grounds of climate, environmental and social criteria—during the third quarter of 2023.⁷⁶

With the Core Carbon Principles, ICVCM intends to address certain key principles of carbon finance, including additionality, mitigation activity information, no double counting, permanence, program governance, registry, robust independent third-party validation and verification, robust quantification of emission reductions and removals, sustainable development impacts and safeguards and transition towards net zero.⁷⁷ ICVCM summarizes these principles as follows:

- ***Additionality:*** A project cannot generate a carbon credit unless its greenhouse gas reduction or removal outcome would not have occurred without the financial incentive of the carbon credit.⁷⁸
- ***Mitigation Activity Information:*** The carbon-crediting program must provide comprehensive, transparent, readily electronically available and non-

⁷⁵ *Our Work*, INTEGRITY COUNCIL FOR THE VOLUNTARY CARBON MKT., <https://icvcm.org/our-work/>.

⁷⁶ Press Release, Integrity Council for the Voluntary Carbon Mkt, *Integrity Council Unveils Timetable to Introduce High-Integrity Label to Voluntary Carbon Market in Q3* (Jan. 19, 2023), <https://icvcm.org/integrity-council-unveils-timetable-to-introduce-high-integrity-label-to-voluntary-carbon-market-in-q3/>.

⁷⁷ *Core Carbon Principles, Assessment Framework and Assessment Procedure: Draft for Public Consultation*, INTEGRITY COUNCIL FOR THE VOLUNTARY CARBON MKT. (July 2022) at 19-20, <https://icvcm.org/wp-content/uploads/2022/07/ICVCM-Public-Consultation-FINAL-Compendium.pdf>.

⁷⁸ *Id.* at 19.

specialized-audience accessible information on all credited mitigation activities.⁷⁹

- ***No Double Counting:*** Mitigation activities may be counted only once towards achieving mitigation targets—this means there can be no double issuance, double claiming or double use.⁸⁰
- ***Permanence:*** The emissions reductions or removals from the mitigation activity must be permanent, and if there is a risk of reversal, the reversal must be fully compensated.⁸¹
- ***Program Governance:*** The carbon-crediting program must have effective governance to ensure transparency, accountability and credit quality.⁸²
- ***Registry:*** The carbon-crediting program must operate or use a registry to securely and unambiguously identify, record and track carbon credits and mitigation activities.⁸³
- ***Robust Independent Third-Party Validation and Verification:*** The carbon-crediting program must have requirements for third-party validation and verification of mitigation activities.⁸⁴
- ***Robust Quantification of Emission Reductions and Removals:*** The greenhouse gas reductions or removals must be robustly quantified under a conservative approach based on completeness and scientific method.⁸⁵
- ***Sustainable Development Impacts and Safeguards:*** The carbon-crediting program must have clear guidance, tools and compliance procedures such that mitigation procedures conform to or go beyond industry best practices.⁸⁶

⁷⁹ *Id.*

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.* at 20.

⁸⁵ *Id.*

⁸⁶ *Id.*

- ***Transition Towards Net-Zero Emissions:*** The mitigation activity must avoid locking in emissions, technologies or practices that are incompatible with achieving the goal of net zero carbon emissions by the middle of the century.⁸⁷

European Commission Proposal for a Framework for Carbon Removal Certificates

Within the European Union's long-term sustainable growth strategy,⁸⁸ on November 30, 2022, the European Commission published the first proposal for a Regulation establishing a Union framework for the certification of carbon removals (i.e., carbon storage or carbon reduction).⁸⁹ As background, the European Climate Law, signed in 2021, makes it legally binding for the European Union to achieve a balance between greenhouse gas emission and removals (climate neutrality) by 2050, and to achieve negative emissions thereafter, in line with the Paris Agreement.⁹⁰ To do so, the first and most urgent priority is the reduction of greenhouse gas emissions, but, simultaneously, there is also a need to compensate for residual emissions, which cannot be eliminated, by scaling up carbon removals. To this end, the proposed regulation aims to boost innovative carbon removal technologies and sustainable carbon farming solutions by establishing a transparent and credible voluntary certification process. One of the possible uses of carbon removal certificates is for companies to purchase and potentially trade them as voluntary carbon offsets. However, it will not be possible to use those certificates for complying with the EU Emission Trading System.⁹¹

⁸⁷ *Id.*

⁸⁸ See generally *A European Green Deal*, Eur. Comm'n, https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/european-green-deal_en.

⁸⁹ Press Release, Eur. Comm'n, *European Green Deal: Commission Proposes Certification of Carbon Removals to Help Reach Net Zero Emissions*, https://ec.europa.eu/commission/presscorner/detail/en/IP_22_7156.

⁹⁰ See *European Climate Law*, Eur. Comm'n, https://climate.ec.europa.eu/eu-action/european-green-deal/european-climate-law_en#:~:text=The%20Climate%20Law%20includes%3A,of%20emission%20reductions%20and%20removals.

⁹¹ *Questions and Answers on EU Certification of Carbon Removals*, Eur. Comm'n, https://ec.europa.eu/commission/presscorner/detail/en/qanda_22_7159.

The proposal sets out rules for the independent verification of carbon removals as well as for the recognition of carbon removals certification schemes. Certifiable carbon removal activities will need to meet four criteria under the acronym of “QU.A.L.ITY”: QUantification (i.e., carbon removal activities need to be measured accurately and deliver unambiguous benefits for the climate), Additionality (i.e., carbon removal activities need to go beyond existing practices and what is required by law), Long-term storage (i.e., certificates are linked to the duration of carbon storage so as to ensure permanent storage) and sustainabilITy (i.e., carbon removal activities must preserve or contribute to sustainability objectives, for example, climate change adaptation, circular economy, water and marine resources and biodiversity).

The proposal, which is now under discussion by the European Parliament and the Council of the EU, has sparked criticism from environmental organizations for being too vague.⁹² In parallel, however, the Commission is setting up an expert group to provide technical advice on the preparation of certification methodologies for carbon removals, with a first meeting foreseen at the beginning of 2023.⁹³ The envisaged framework, which, once adopted, will be binding and applicable in all EU member states, will become fully operational only once the Commission has adopted the first certification methodology and recognized the first recognition scheme.

Carbon Derivatives

Derivatives on voluntary carbon credits, such as spot contracts, options and swaps, are viewed as an important part of the growing carbon market. Many companies use carbon derivatives to meet the goals of carbon compliance programs and manage risk in a cost-effective way. Carbon derivatives also aid businesses with financial positions that are indirectly tied to carbon prices. Carbon derivative pricing also serves as a bellwether to assess climate transition risk within a portfolio.⁹⁴

⁹² Alice Hancock, *EU's Proposed Carbon Removal Rules Open to Greenwashing, Say Experts*, FIN. TIMES (Nov. 28, 2022), <https://www.ft.com/content/c3ab4d6d-a7af-4462-8616-a8a47cf69e51>.

⁹³ *Frequently Asked Questions: Expert Group on Carbon Removals*, Eur. Comm'n, https://climate.ec.europa.eu/system/files/2022-07/Frequently_Asked_Questions-Expert_Group_on_Carbon_Removals.pdf

⁹⁴ *Role of Derivatives in Carbon Markets*, ISDA (Sept. 2021) at 1, <https://www.isda.org/a/soigE/Role-of-Derivatives-in-Carbon-Markets.pdf>.

In 2011, then CFTC Chairperson (and now SEC Chairperson) Gary Gensler appeared to suggest in a report produced by the Interagency Working Group for the Study of Oversight of Carbon Markets that the secondary carbon markets would be regulated like derivatives on physical commodities.⁹⁵ The report, however, was far from definitive. Rather, it went on to state that “no set of laws currently exist that apply a comprehensive regulatory regime—such as that which exists for derivatives—specifically to secondary market trading of carbon allowances and offsets. Thus, for the most part, absent specific action by Congress, a secondary market for carbon allowances and offsets may operate outside the routine oversight of any market regulator.”⁹⁶ With this in mind, we set out below an overview of the regulatory landscape for these products in the United States:⁹⁷

- **Spot Contracts:** Spot contracts are contracts of sale resulting in “actual delivery” within “28 days or such other longer period as the [CFTC] may determine by rule or regulation based upon the typical commercial practice in cash or spot markets for the commodity involved.”⁹⁸ Spot contracts, including those relating to environment commodities like carbon, generally fall outside the purview of CFTC regulation, with the exception of anti-fraud or manipulation laws.
- **Futures:** Environmental commodity futures are standardized exchange-traded contracts that permit hedging against future GHG emission costs. Like other

⁹⁵ See *Interagency Working Group for the Study of Oversight of Carbon Markets, Report on the Oversight of Existing and Prospective Carbon Markets*, Commodity Futures Trading Comm’n (Jan. 18, 2011),

www.cftc.gov/sites/default/files/idc/groups/public/@swaps/documents/file/dfstudy_carbon_011811.pdf.

⁹⁶ Further Definition of “Swap,” “Security-Based Swap,” and “Security-Based Swap Agreement”; Mixed Swaps; Security-Based Swap Agreement Recordkeeping, 77 Fed. Reg. 48208, 48233 – 48235 (Aug. 12, 2012) (the 2012 Product Rule).

⁹⁷ The following discussion regarding the derivatives regulatory landscape is sourced from a prior work of the author of this article, North, *supra* note 36, at 4. For further discussion of the regulatory landscape, please see *Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US*, *supra* note 33, at 7-9.

⁹⁸ 7 U.S.C. § 2(c)(2)(D)(ii)(III) (2012).

futures, these futures fall under the CFTC's exclusive authority.⁹⁹ Futures on carbon allowances are a core component of cap-and-trade carbon schemes.¹⁰⁰

- **Swaps:** Swaps are broadly defined by Section 721(a) of the Dodd-Frank Act to include all swaps and options, such as puts, calls, floors and collars, or any similar option for the purchase or sale, or based on the value, of the environmental commodity. Like other swaps, environmental commodity swaps fall under the jurisdiction of the CFTC and are traded over-the-counter.¹⁰¹ This results in environmental commodity swaps being subject to the CFTC's rules on mandatory trading, centralized clearing and reporting, among others.

The parties' intent to make and take delivery is a key factor in determining how to assess a carbon derivative. For example, swaps are usually settled by payment rather than physical delivery, and spot contracts result in immediate settlement and delivery of the environmental commodity. In contrast, in a forward contract, delivery of the physical commodity is deferred for commercial purposes, and, while the parties need not ultimately make and take delivery, the parties must intend for the contract to result in delivery at the time it is executed. Participants in the carbon markets should be aware of the application of these classifications and, in turn, the regulatory regime, particularly as the carbon markets grow. Participants should focus on details such as the possibility that a transaction may be rolled over or cash settled, embedded optionality, intent to make and take delivery, whether counterparties are indeed capable of making and taking delivery through, among other considerations, registration with relevant carbon credit registries and whether transfers between accounts properly serve as physical delivery.¹⁰²

Increased Role of the Private Sector

Finally, COP 27 highlighted the large and growing role for the private sector in addressing climate change. COP 27 saw increased involvement from the private sector, "particularly across the areas of climate ambition, low-carbon technology and climate

⁹⁹ 7 U.S.C. § 2(a)(1)(A)) (2012).

¹⁰⁰ *Letter from Walt Lukken to Christopher Kirkpatrick, supra* note 43 at 7.

¹⁰¹ 7 U.S.C. § 1a(47) (2012).

¹⁰² *See Voluntary Carbon Markets: Analysis of Regulatory Oversight in the US, supra* note 33 at 9.

adaptation.”¹⁰³ For 2017-18, the adaptation market represented less than 20% of all climate finance, and only roughly 1.6% of that adaptation funding came from private investments.¹⁰⁴ However, Bank of America analysts have estimated that the adaptation market alone may be worth \$2 trillion per year by 2026.¹⁰⁵ To put this into perspective, BlackRock estimates that global assets under management in sustainable assets grew from \$1.2 trillion in 2016 to \$2.55 trillion in 2020. Even beyond the growing size of the market, sustainable investment offers a potential opportunity for investors. As BlackRock’s Dr. Andrew Ang has shown, stocks with lower volatilities typically deliver similar returns as the market, and companies with positive Environmental, Social and Governance (ESG) characteristics, including lower carbon emissions, tend to have less volatile stock.¹⁰⁶

The growth of sustainable finance has ushered in a wave of innovative financial products. For example, in September 2022, Barbados entered into a \$146.5 million-equivalent dual currency “blue” term loan, with Credit Suisse International acting as global lead arranger for a USD tranche and CIBC FirstCaribbean Limited acting as domestic lead arranger for a BBD tranche. The conversion of outstanding debt owed by Barbados is expected to generate savings of approximately \$50 million over the next fifteen years. Under the terms of certain conservation agreements entered into with

¹⁰³ Antonia Gawel & Nathan Cooper, *What Did COP27 Accomplish and What Actions Can We Expect as a Result?* WORLD ECON. F. (Nov. 23, 2022), <https://www.weforum.org/agenda/2022/11/what-happened-cop27-climate-change-what-is-next/>.

¹⁰⁴ See Arame Tall et al., *Enabling Private Investment in Climate Adaptation & Resilience: Current Status, Barriers to Investment and Blueprint for Action*, WORLD BANK GRP. & GLOB. FACILITY FOR DISASTER REDUCTION & RECOVERY (2021) at 10, <https://openknowledge.worldbank.org/bitstream/handle/10986/35203/Enabling-Private-Investment-in-Climate-Adaptation-and-Resilience-Current-Status-Barriers-to-Investment-and-Blueprint-for-Action.pdf?sequence=5&isAllowed=y>.

¹⁰⁵ Tim Quinson, *Investors Bet Climate Adaptation Will Soon Be Profitable*, BLOOMBERG (Nov. 17, 2021), <https://www.bloomberg.com/news/articles/2021-11-17/why-investing-in-climate-adaptation-will-soon-be-very-profitable-green-insight#xj4y7vzkg>.

¹⁰⁶ Andrew Ang, *Factoring in Sustainability: A Worthy Pair*, BLACKROCK (Mar. 16, 2022), <https://www.blackrock.com/us/individual/investment-ideas/what-is-factor-investing/factor-commentary/andrews-angle/factoring-in-sustainability>.

The Nature Conservancy, Barbados will direct savings into the Barbados Environmental Sustainability Fund (BESF), which will oversee and fund marine conservation and other environmental and sustainable development projects in Barbados, as well as into an endowment trust to fund long-term marine conservation efforts in Barbados. In addition to the funding of the BESF and endowment trust, Barbados is committed to a number of conservation commitments and milestones, including the protection and management of up to 30% of Barbados' Exclusive Economic Zone and Territorial Sea—an area of more than 55,000 square kilometers. The blue loan incorporates a “natural disaster clause,” which allows for payment deferral of the blue loan upon the occurrence of certain climate-related events.¹⁰⁷

As another example, in October 2022, the Republic of Uruguay issued its first-ever sustainability-linked bond, which was only the second ever sustainability-linked bond issued by a sovereign. Uruguay innovated by becoming the first issuer to include a coupon step-down if it overperforms on the predefined targets by a certain threshold. The key performance indicator (KPI) targets contemplated by Uruguay's bonds include achieving a reduction in aggregate GHG emissions, expressed in CO₂ equivalent per real GDP unit, by 2025 compared to 1990, and maintaining or increasing the native forest area covering Uruguay's territory by 2025 compared to 2012. Concurrently with the bond offering, Uruguay launched an offer to purchase for cash certain series of outstanding U.S. dollar-denominated bonds of Uruguay. Credit Agricole Securities (USA) Inc., HSBC Securities (USA) Inc., J.P. Morgan Securities LLC and Santander Securities Inc. acted as underwriters for the bonds offering and joint dealer managers for the tender offer.¹⁰⁸ Innovative financings of this sort provide an attractive way to put private capital to work against climate change.

Beyond bonds and loans, SLDs also offer a growing opportunity for climate-conscious market participants. SLDs typically involve a conventional derivative with

¹⁰⁷ Press Release, Cleary Gottlieb Steen & Hamilton LLP, *Barbados in Debt Conversion for Nature Transaction to Support Marine Conservation* (Sept. 28, 2022),

<https://www.clearygottlieb.com/news-and-insights/news-listing/cleary-gottlieb-advises-barbados-in-debt-conversion-for-nature-transaction-to-support-marine-conservation>.

¹⁰⁸ Press Release, Cleary Gottlieb Steen & Hamilton LLP, *Uruguay Issues First Sustainability-Linked Bond* (Oct. 20, 2022), <https://www.clearygottlieb.com/news-and-insights/news-listing/uruguay-issues-first-sustainability-linked-bond>.

an ESG overlay that affects payment flows.¹⁰⁹ The first SLD was executed in August 2019 and served to hedge the interest rate risk of a five-year floating rate revolving credit facility. SLDs may be structured in a variety of ways but typically involve an ESG overlay in the form of an ESG-linked KPI that is applied to one or both of the SLD counterparties. By way of example, the KPI could be related to decarbonization, corporate philanthropy, renewable energy or board diversity. SLD overlays may work through a variety of mechanisms linked to achievement of (or failure to meet) KPIs, such as adjusting cashflows between the counterparties, adjusting the spread applied to an interest rate, or charging a fee (or crediting a rebate). In some cases, the excess is crystalized in a charitable donation by one or either party. Like other sustainability-linked financial products, SLDs typically attract market participants who have specific ESG pressures, such as ESG-linked targets.¹¹⁰

Finally, the Inflation Reduction Act also opens new pathways to transfer private capital into renewable projects. For example, the Inflation Reduction Act includes updates to a tax credit located in Section 45Q of the Internal Revenue Code.¹¹¹ This credit incentivizes use of CCUS technology. The updates increased the credit values across the board for qualifying technologies, thus increasing the incentive to use these technologies. Further, the updates allow 45Q credit recipients to transfer all or any portion of the credit value to any third-party tax-paying entity in exchange for a cash payment during the credit window.¹¹² Beyond monetization of 45Q credits, these updates also have the potential to advance the voluntary carbon markets. Projects utilizing CCUS technology in conformity with 45Q also have the opportunity to sell

¹⁰⁹ See *The Way Forward For Sustainability-linked Derivatives*, ISDA (Nov. 21, 2022), <https://www.isda.org/2022/11/21/the-way-forward-for-sustainability-linked-derivatives/>; see also *ISDA Future Leaders in Derivatives, Sustainability-linked Derivatives: Where to Begin?* ISDA (May 2022) at 6, <https://www.isda.org/a/UUVgE/Sustainability-linked-Derivatives-Where-to-Begin.pdf>.

¹¹⁰ See *ISDA Future Leaders in Derivatives, Sustainability-linked Derivatives: Where to Begin?* *supra* note 109, at 6.

¹¹¹ See 26 U.S.C. § 45Q (Credit for carbon oxide sequestration).

¹¹² See Clean Air Task Force, *Carbon Capture Provisions in the Inflation Reduction Act of 2022* (2022), <https://cdn.catf.us/wp-content/uploads/2022/08/19102026/carbon-capture-provisions-ira.pdf>.

carbon credits into the market representing their carbon abatement.¹¹³ Thus, if more businesses are inspired to adopt CCUS technology due to the favorable tax treatment under 45Q, an increased supply of carbon credits, and therefore increased trading, in the voluntary carbon markets may follow.

However, while green finance presents many rapidly expanding areas of opportunity, companies should carefully ensure that they are following internal policies and procedures and providing accurate information to investors. This is particularly true as “greenwashing”¹¹⁴ is proving to be a growing focus of regulators. For example, in 2022, the SEC brought charges against multiple global financial institutions in relation to disclosure and marketing associated with their ESG investment practices.

¹¹³ See Krysta Biniak et al., *Scaling the CCUS Industry to Achieve Net-Zero Emissions*, MCKINSEY & CO. (Oct. 28, 2022), <https://www.mckinsey.com/industries/oil-and-gas/our-insights/scaling-the-ccus-industry-to-achieve-net-zero-emissions>; see also Brandon Mulder, *45Q, Financial Uncertainties Hinder Capital Flow for CCS Deployment: Panel*, S&P GLOB. COMMODITY INSIGHTS (June 16, 2022), <https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/061622-45q-financial-uncertainties-hinder-capital-flow-for-ccs-deployment-panel>.

¹¹⁴ “Greenwashing” is when “misleading or unsubstantiated claims about environmental performance are made by businesses or investment funds about their products or activities.” *ISDA Future Leaders in Derivatives, Sustainability-linked Derivatives: Where to Begin?* *supra* note 109, at 11.

Loss and Damage Fund

A key result of COP 27 was the establishment of a “loss and damage fund.” The loss and damage fund has been touted as “historic,”¹¹⁵ a “breakthrough,”¹¹⁶ and a “landmark decision.”¹¹⁷

The aim of the loss and damage fund is to provide financial assistance to those developing countries that are “particularly vulnerable” to climate change.¹¹⁸ The loss and damage fund will address damages that countries can neither adapt to nor avoid. This is a departure from previous climate funding, which largely focused on

¹¹⁵ See, e.g., *Historic ‘Loss and Damage’ Fund Adopted at COP27 Climate Summit*, ALJAZEERA (Nov. 20, 2022), <https://www.aljazeera.com/news/2022/11/20/historic-loss-and-damage-fund-adopted-at-cop27-climate-talks>; *COP27 Ends with Announcement of Historic Loss and Damage Fund*, U.N. ENV’T PROGRAMME (Nov. 22, 2022), <https://www.unep.org/news-and-stories/story/cop27-ends-announcement-historic-loss-and-damage-fund>; Pradeep Kurukulasuriya et al., *What the New ‘Loss and Damage’ Fund Needs for Success*, U.N. DEV. PROGRAMME (Nov. 22, 2022), <https://www.undp.org/blog/what-new-loss-and-damage-fund-needs-success>.

¹¹⁶ See, e.g., Press Release, UNFCCC, *COP27 Reaches Breakthrough Agreement on New ‘Loss and Damage’ Fund for Vulnerable Countries* (Nov. 20, 2022), <https://unfccc.int/news/cop27-reaches-breakthrough-agreement-on-new-loss-and-damage-fund-for-vulnerable-countries>; Valerie Volcovici et al., *COP27 Delivers Climate Fund Breakthrough at Cost of Progress on Emissions*, REUTERS (Nov. 21, 2022), <https://www.reuters.com/business/cop/countries-agree-loss-damage-fund-final-cop27-deal-elusive-2022-11-20/>.

¹¹⁷ See, e.g., Brice Böhmer, *Landmark Decision at COP27 to Set Up Loss and Damage Fund*, CLIMATE ACTION NETWORK INT’L (Nov. 20, 2022), <https://climatenetwork.org/2022/11/20/landmark-decision-at-cop27-to-set-up-loss-and-damage-fund/>; Meena Raman, *COP27: Landmark Win on Loss and Damage Fund*, GLOB. ISSUES (Nov. 22, 2022), <https://www.globalissues.org/news/2022/11/22/32483>.

¹¹⁸ *What You Need to Know About the COP27 Loss and Damage Fund*, U.N. ENV’T PROGRAMME (Nov. 29, 2022), <https://www.unep.org/news-and-stories/story/what-you-need-know-about-cop27-loss-and-damage-fund>; Kate Abnett & Dominic Evans, *Explainer: Who Will Pay for Climate ‘Loss and Damage’?* WORLD ECON. F. (Nov. 21, 2022), <https://www.weforum.org/agenda/2022/11/explainer-who-will-pay-for-climate-loss-and-damage/>.

decarbonization and adaptation.¹¹⁹ In the words of the UN Environment Programme, loss and damage refers to “the negative consequences that arise from the unavoidable risks of climate change, like rising sea levels, prolonged heatwaves, desertification, the acidification of the sea and extreme events, such as bushfires, species extinction and crop failures.”¹²⁰

The establishment of the loss and damage fund was the result of more than three decades of effort from climate-change-vulnerable nations, particularly small island states.¹²¹ Both the European Union and the United States feared that a loss and damage fund might open them to legal liability for historic emissions and thus had long rejected the proposal.¹²² Notably, the agreement reached in Sharm El-Sheikh assuaged this concern by providing that nations cannot be held legally liable for loss and damage fund payments, and both the EU and the U.S. signed on.¹²³

Many details of the loss and damage fund remain to be hammered out at future COPs and other such conferences.¹²⁴ However, these areas of future clarification present an opportunity for private sector participants. The agreement text specifically contemplates inviting financial institutions to share views on “how they might enhance access to and/or the speed, scope and scale of availability of finance for activities relevant to addressing loss and damage, including potential limitations and barriers and options for addressing them,”¹²⁵ “the most effective ways to provide funding to respond

¹¹⁹ Abnett, *supra* note 118.

¹²⁰ *What You Need to Know About the COP27 Loss and Damage Fund*, *supra* note 118.

¹²¹ *Id.*; Chandrasekhar, *supra* note 18; see also Brad Plumer et al., *In a First, Rich Countries Agree to Pay for Climate Damages in Poor Nations*, N.Y. TIMES (Nov. 19, 2022), <https://www.nytimes.com/2022/11/19/climate/un-climate-damage-cop27.html>.

¹²² Volcovici, *supra* note 116; Abnett, *supra* note 118; see also Plumer, *supra* note 121.

¹²³ See Plumer, *supra* note 121.; Jennifer Hijazi & Dean Scott, *Climate Damages Paid to Poorer Nations Faces Divided Congress*, BLOOMBERG LAW (Dec. 1, 2022), <https://news.bloomberglaw.com/environment-and-energy/us-payout-of-loss-and-damage-faces-hurdles-from-split-congress>.

¹²⁴ Abnett, *supra* note 118.

¹²⁵ *Funding Arrangements for Responding to Loss and Damage Associated with the Adverse Effects of Climate Change, Including a Focus on Addressing Loss and Damage*, UNFCCC (Nov. 20, 2022), at § 7(d), <https://unfccc.int/documents/624440>.

to needs related to addressing loss and damage associated with the adverse effects of climate change,”¹²⁶ and “the potential for such institutions to contribute to funding arrangements, including new and innovative approaches, responding to loss and damage associated with the adverse effects of climate change.”¹²⁷

The final funding mechanisms of the loss and damage fund remain to be seen, and the tie-ins to and opportunities for the voluntary carbon markets and SLDs will likely become more apparent at that time. For example, in the event that funding is someday tied to current national carbon emissions, nations may be economically incentivized to decrease carbon emissions in order to reduce their expected payments to the loss and damage fund. This expense, in turn, may be passed on to industry. If it becomes more expensive to emit carbon, the cost to capture carbon may fall below the cost to emit it and thus serve as an impetus for industry players to adopt CCUS technology. This, in turn, could fuel the voluntary carbon markets by providing an additional source of credits. While only time will tell how the loss and damage fund plays out, it is a key commitment of COP 27 and presents a smart area for the private sector to remain engaged. It is also possible that loss and damage fund contributions could someday serve as an SLD KPI, or contributions to the loss and damage fund could even serve as a requirement for issuers who fail to meet their KPIs.

Conclusion

With each COP, the global community works further towards the shared goal of decarbonization. COP 27 was no exception. In the wake of COP 27, the private sector is presented with an excellent opportunity to engage in this important, innovative and often profitable work. While the field of sustainable finance in general shows no signs of slowing, areas like the voluntary carbon markets, which may ultimately converge with products such as SLDs, are likewise in important moments of development and

¹²⁶ *Id.* at § 11.

¹²⁷ *Id.* at § 12.

are likely to continue to grow and evolve at a rapid pace, notwithstanding that there may be hurdles along the way.¹²⁸

Deborah North's practice focuses on a broad range of derivatives and structured finance transactions, with a focus on OTC derivatives and structured synthetic products as well as the cross-border security arrangements and the regulatory issues that they often entail. She has advised on a range of products including credit-linked notes, structured repos and contingent credit default swaps transactions.

Laura Prosperetti's practice focuses on EU and Italian banking and financial law and regulation. She advises clients on a broad range of regulatory, transactional and enforcement matters, including compliance issues linked to the implementation of EU financial regulatory reforms, mergers and acquisitions of regulated entities and regulatory investigations and enforcement.

Laura Daugherty's practice focuses on corporate and financial transactions. She concentrates on cross-border transactions, principally in Latin America. She is also active in the firm's sustainability practice.

¹²⁸ See, e.g., Jennifer L, *Voluntary Carbon Market Prices Collapse & Vanguard Exit Net Zero*, CARBONCREDITS.COM (Dec. 7, 2022), https://carboncredits.com/voluntary-carbon-market-prices-collapse-vanguard-exit-net-zero/?no_cache=1670455744 (stating that the prices for the voluntary carbon market had one of the worst days in their history in early December 2022).

