

Capital Markets Strategy

Essential inCights for the C-Suite



Inextricably Linked

COP 26, Climate Risk & the
FSOC's Financial Stability Report

NOV 2021



For the first time, FSOC is recognizing that climate change is an emerging and increasing threat to U.S. financial stability. This report puts climate change squarely at the forefront of the agenda of its member agencies and is a critical first step forward in addressing the threat of climate change. It will by no means be the end of our work.



*Treasury Secretary Janet Yellen on FSOC's Report
on Climate-Related Financial Risk
(October 2021)*





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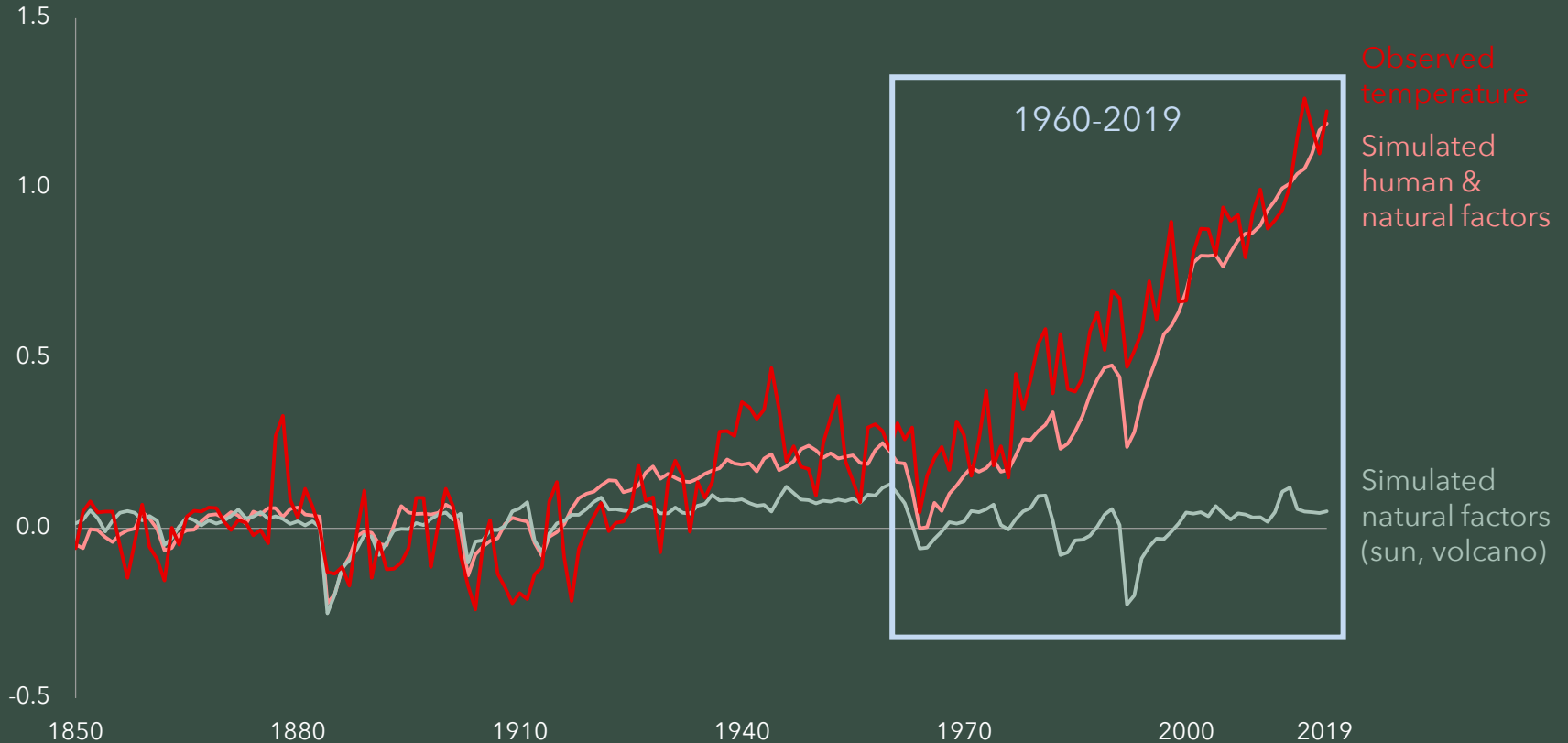


Introduction: Climate Risk Rising

Hottest in 100,000 years

Global average temperatures have already risen 1.1°C from pre-industrial levels and will continue to rise for the next three decades due to emissions already in the atmosphere

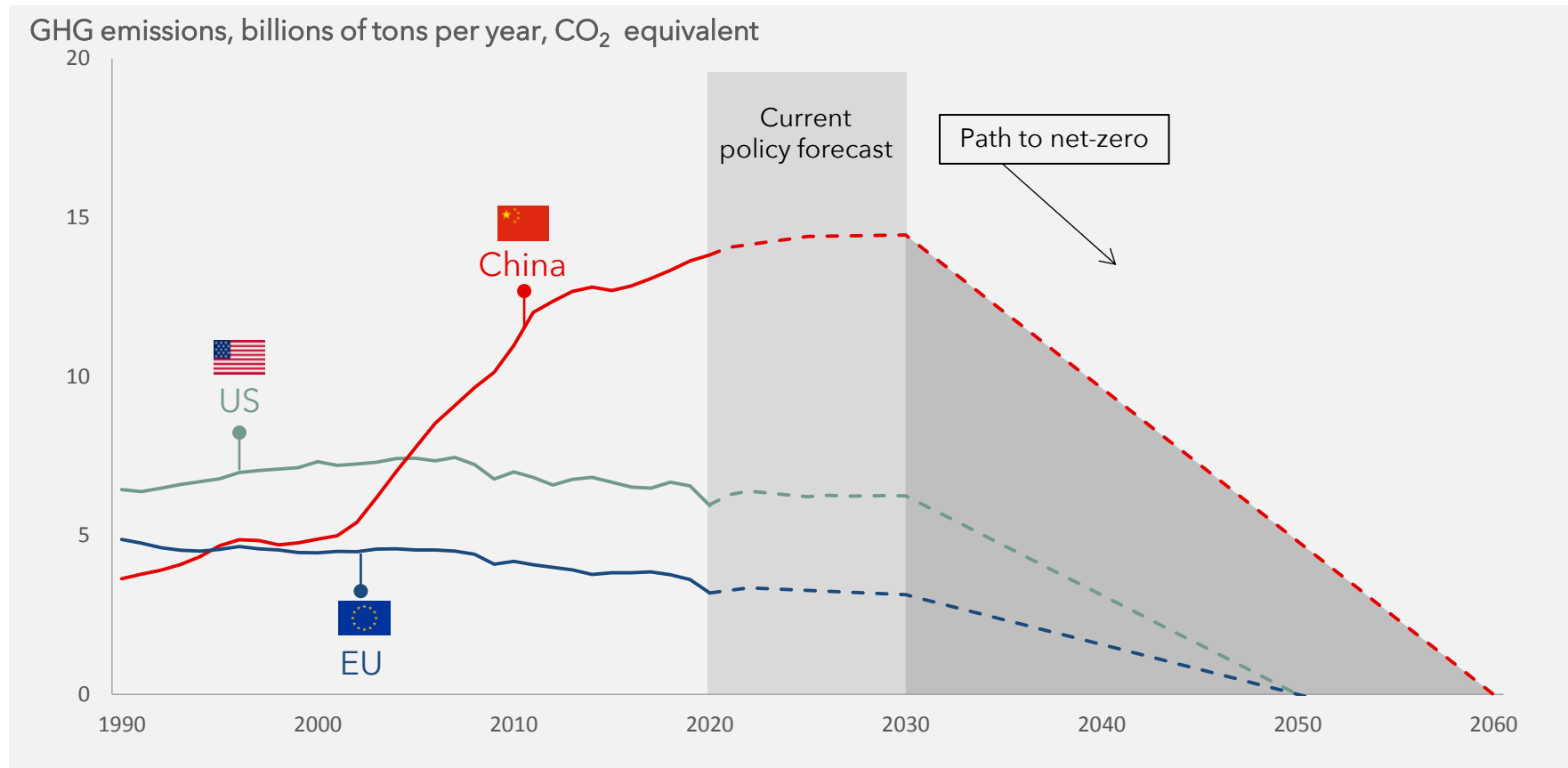
Global temperature change, degrees Celsius



Source: (1) Bloomberg, "Climate Scientists Reach 'Unequivocal' Consensus on Human-Made Warming in Landmark Report" (August 9, 2021). IPCC AR6 Working Group I Report. "Climate Change 2021 - The physical Science Basis, Summary for Policy Makers."







On Track for 2.7 Degree Temperature Increase

Renewing and strengthening national emissions reduction pledges is one of the primary focus areas for COP26. According to a recently released UN report, global temperatures are on track to increase 2.7°C above pre-industrial levels by 2100, well above the 1.5 - 2.0°C target of the Paris Climate Agreement.



Source: (1) J.P. Morgan Asset Management, "ESG Explained." Climate Action Tracker - Country Assessments. US & China data as of September 17, 2021. EU data as of September 14, 2021. Current policies and action is maximum scenario. Historical emissions exclude forestry. GHG emissions tonnes per year, CO₂ equivalent. 2020-2030 is current policy forecast. 2030 onward is path to net-zero

The Importance of Targeting 1.5°C

	1.5°C	2°C	2°C Impact
 <p>Extreme Heat Global population exposed to severe heat at least once every five years</p>	14%	37%	2.6x worse
 <p>Sea-Ice-Free Arctic Number of ice-free summers</p>	At least 1 every 100 years	At least 1 every 10 years	10x worse
 <p>Sea Level Rise Amount of sea level rise by 2100</p>	0.40 meters	0.46 meters	.06m more
 <p>Permafrost Amount of Arctic permafrost that will thaw</p>	4.8 million KM²	6.6 million KM²	38% worse
 <p>Crop Yields Reduction in maize harvests in tropics</p>	3%	7%	2.3x worse
 <p>Fisheries Decline in marine fisheries</p>	1.5 million tonnes	3 million tonnes	2x worse

Source: World Resources Institute, "Ambitious Climate Action by G20 Countries Can Limit Global Warming to 1.7 Degrees Celsius" (September 16, 2021).



Expectations for COP26

1. 26th Annual Conference of the Parties

More than 25,000 global participants from nearly 200 countries, including US President Joe Biden and approximately 100 heads of state, gathered in Glasgow, Scotland for the 26th annual Conference of the Parties (COP26). The two week conference is focused on implementing policies to reach net zero by 2050 and limit global temperature increases.

Goals for the COP26 fall into 4 main groups



1.

Mitigation

- Revise NDCs to achieve net zero by 2050 and include interim 2030 targets
- Transition away from coal
- Transition to zero emission vehicles



2.

Adaptation

- Develop plans to protect and restore ecosystems
- Invest in resilient infrastructure to counter physical climate risks
- Protect and restore habitats



3.

Finance

- Mobilize at least \$100 bn in climate finance per year to fund the transition in emerging markets
- Work with both private and public sector to mobilize funds
- Finance nature-based solutions



4.

Collaboration

- Finalize Article 6 of the "Paris Rulebook"
- Secure international agreement on carbon markets
- Encourage collaboration between governments, corporates and the public

**Oct 31 -
Nov 12**

COP26 global
climate conference
in Glasgow
Scotland

**197
Parties**

Parties to the UN
Framework
Convention
on Climate
Change
(196 countries &
the EU)

**25,000+
Attendees**

Number of
attendees
including ~100
heads of state,
diplomats,
business leaders,
activists and
academics



Notably, Vladimir Putin,
Jair Bolsonaro and Xi
Jinping will not attend the
conference in person

01-12 NOV 2021
GLASGOW

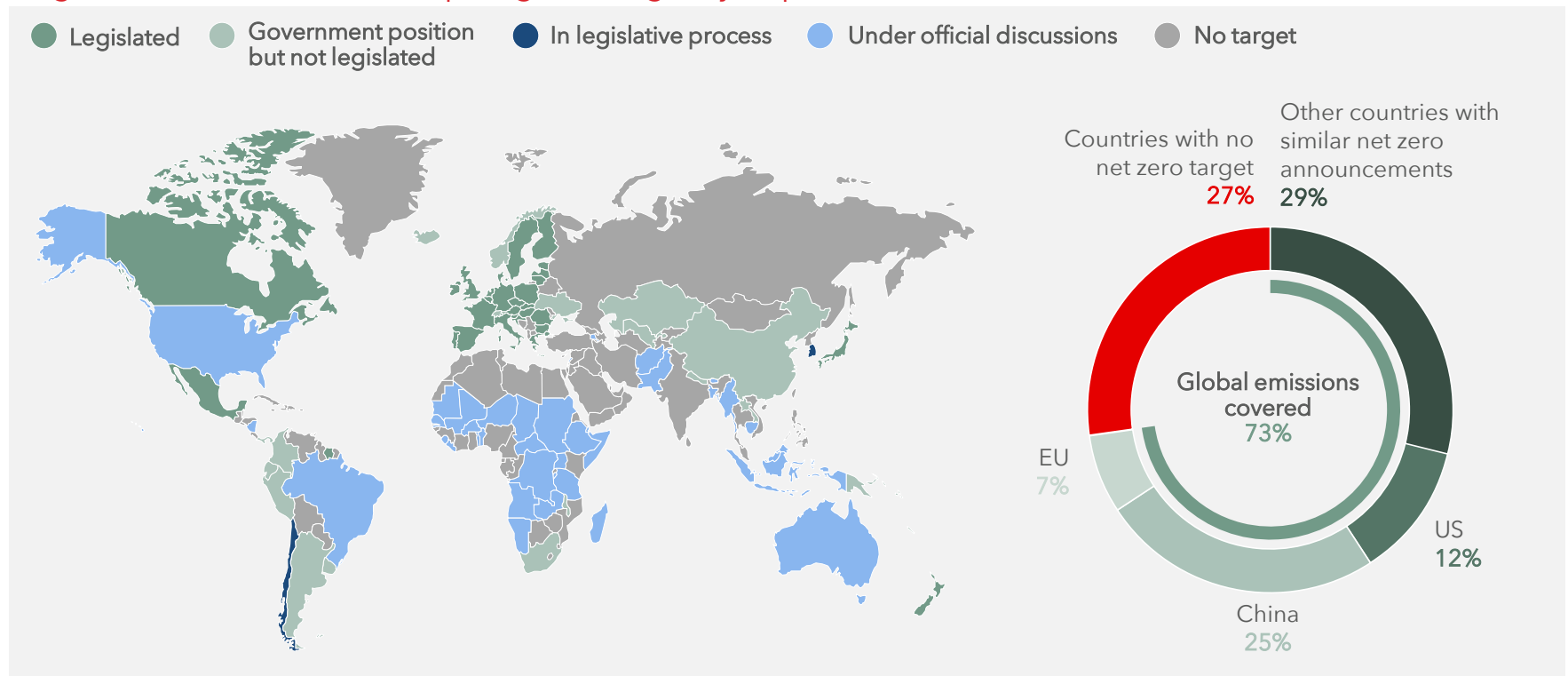
COP26

IN PARTNERSHIP WITH ITALY



2. Reaching Global Net Zero

Ahead of the COP26 conference, 131 countries, representing 73% of global greenhouse gas (GHG) emissions pledged to be net-zero or carbon neutral between 2040 and 2060. An analysis by the Climate Action Tracker showed that if all announced pledges were fully implemented, the rise in global temperatures could be held to 2.0°C by 2100 (still above the target of 1.5°C). However, many uncertainties remain over the underlying assumptions in net-zero pledges, comprehensiveness of targets and the likelihood of pledges being fully implemented.



Source: (1) MUFG, "COP26 - Great Expectations for Major Change" (October 2021, Ehsan Khoman). Bloomberg, Government sources, IPCC, UNFCCC, UK COP26, WRI CAIT, MUFG Research * includes net-zero and carbon neutrality targets with a range of deadlines. (2) Climate Action Tracker. Share of GHG emissions covered by countries that have adopted or announced net zero emission targets (agreed in law, as part of an initiative, or under discussion). Compilation based on ECIU (2021) as of 29 April 2021 complemented by CAT analysis. Emissions data for 2017 taken from EDGAR emissions database (EDGAR, 2019).

Rating National Net-Zero Targets

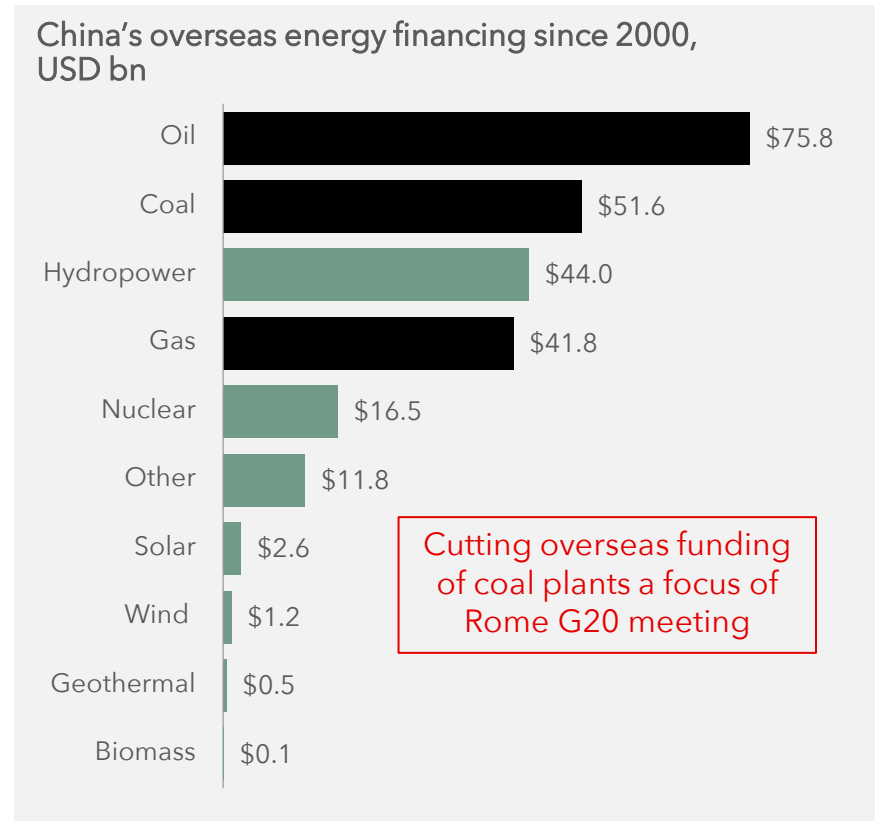
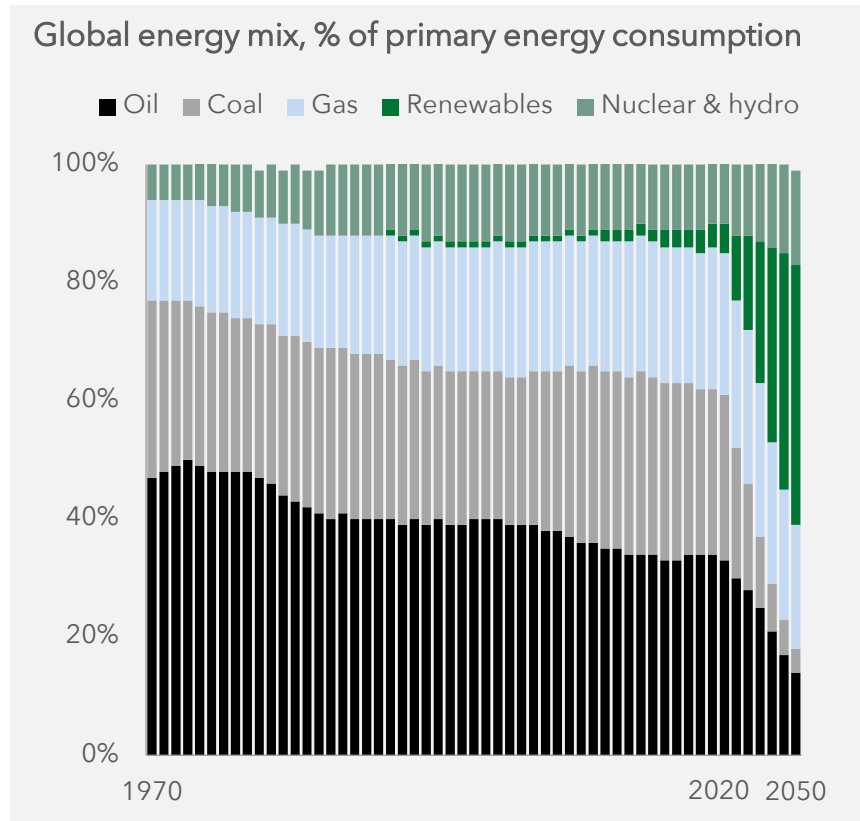
Of the 196 countries that submitted Nationally Determined Contributions in 2015, only 116 of them have been updated to include stronger 2030 interim targets and even fewer countries are actually on track to meet their commitments. A study by the Climate Action Tracker shows that most net zero targets are too vague to be considered "Paris Aligned".

Net zero target design elements											
Rating the comprehensiveness of national net zero target design		Target year	Emissions coverage	International aviation and shipping	Reductions or removals outside of own border	Legal status	Separate reduction & removal targets	Review process	Carbon dioxide removal	Comprehensive planning	Clarity on fairness of target
Country	Rating	1	2	3	4	5	6	7	8	9	10
EU	Acceptable	2050	✓	—	✓	✓	✗	✓	✓	✓	✗
Chile	Acceptable	2050	✓	✗	✓	—	✓	—	✓	✓	✗
Costa Rica	Acceptable	2050	✓	✗	✓	—	✓	—	✓	✓	✗
Germany	Average	2045	✓	✗	✗	✓	✓	✓	✗	—	—
UK	Average	2050	✓	✓	✗	✓	✗	✓	✗	—	—
Canada	Average	2050	✓	✗	✓	✓	✗	✓	✗	—	✗
Japan	Poor	2050	✓	✗	✗	✓	✗	✓	✗	—	✗
New Zealand	Poor	2050	✗	✗	✗	✓	✗	✓	✗	—	✗
South Korea	Poor	2050	✗	✗	✗	✓	✗	—	✗	—	✗
USA	Information Incomplete	2050	✓	?	?	—	?	?	?	—	?
China	Information Incomplete	Before 2060	✓	?	?	—	?	?	?	?	?
South Africa	Information Incomplete	2050	✗	?	?	—	?	?	?	?	?
Nigeria	Information Incomplete	ASAP after 2050	?	?	?	—	?	?	?	?	?
Argentina	Information Incomplete	2050	✗	?	?	—	?	?	?	?	?
Brazil	Information Incomplete	2050	?	?	?	—	?	?	?	?	?
Colombia	Information Incomplete	2050	?	?	?	?	?	?	?	?	?

Source: (1) <https://climateactiontracker.org/publications/global-update-september-2021/>

3. Clean Energy Transition

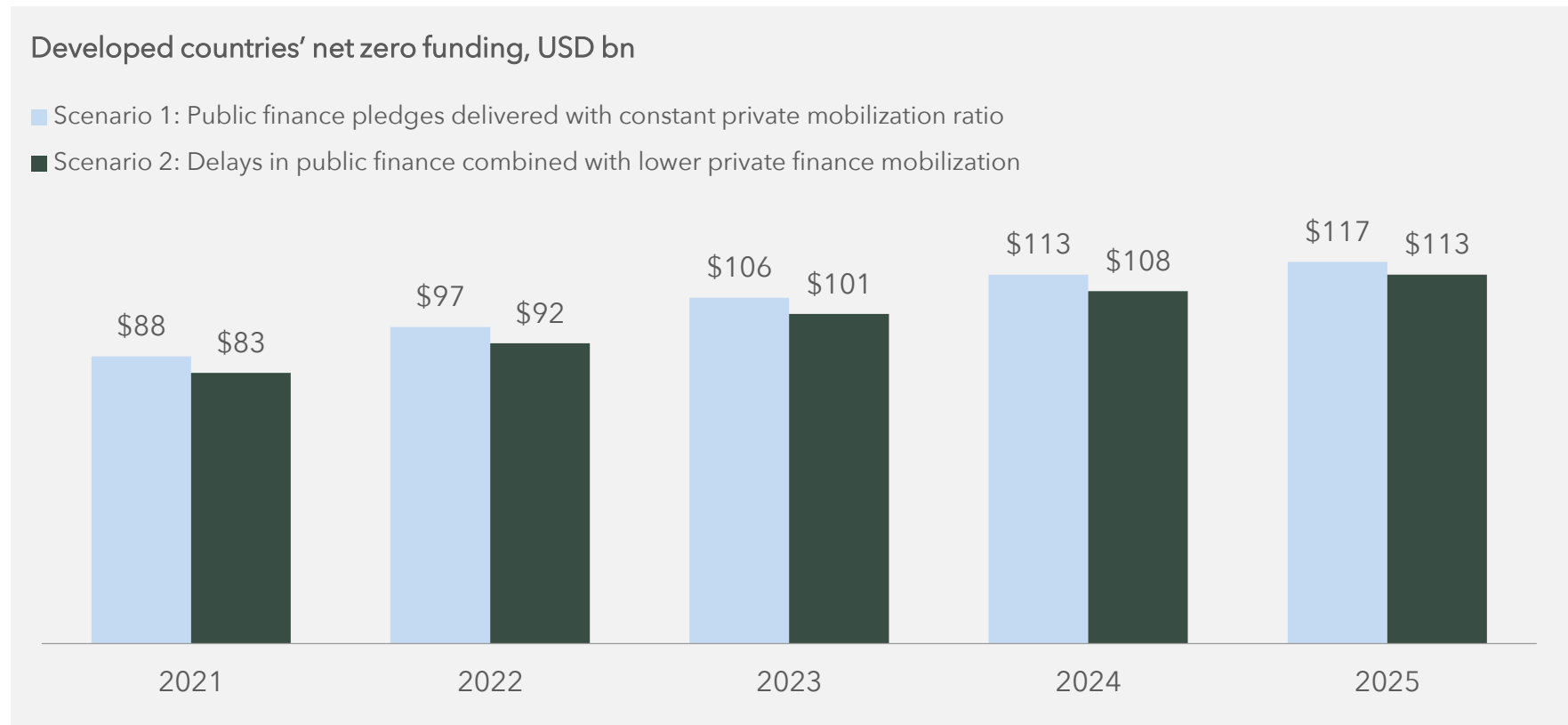
As part of the energy transition process, COP26 organizers hope to agree on plans to eliminate the world's coal power plants. While eliminating domestic coal power is unlikely at this point, an agreement could be reached on eliminating funding of overseas coal plants. China already announced its intention to cut funding to overseas coal projects.



Source: (1) J.P. Morgan Asset Management, "ESG Explained." "2020 onward forecast is based on rapid scenario. BP Energy Outlook 2020 . Data as of (2) Bloomberg, "China Quitting Overseas Coal Should be a Boon for Renewables" (September 23, 2021). Boston University's Global Development Policy Center. Note -2000-2020 overseas energy investments from China Development Bank and Export-Import Bank

4. Financing the Net Zero Transition

Developed countries pledged to provide \$100 billion per annum between 2020 and 2025 to support the transition to carbon neutrality in developing countries. However, a new study shows that donor countries are only on track to meet the \$100 billion target by 2023. The funding delay is likely to complicate negotiations during COP26.

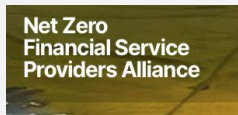


Source: (1) Bloomberg "Rich Nations Fail to Meet Climate Fund Target in Blow to COP" (October 25, 2021). OECD.

Glasgow Financial Alliance for Net Zero

Chaired by former Bank of England Governor Mark Carney, in conjunction with the UNFCCC Climate Action Champions and the UN Race to Zero campaign, the Glasgow Financial Alliance for Net Zero (GFANZ) brings together new and existing net zero finance initiatives into one sector-wide strategic forum

GFANZ represents over 160 financial institutions worth over \$70 trillion in assets by bringing together existing financial sub-sector net-zero initiatives:



GFANZ Initiatives:

1. **Broaden** Race to Zero's existing finance sector campaign to establish credible net zero commitments covering all financed activities in all sectors of the financial system.
2. **Expand** the number of financial institutions with high ambition, credible, and transparent commitments to financing the transition to net zero.
3. **Ensure** that commitments are backed by interim targets (2030 or sooner), alongside robust transition plans consistent with 1.5°C above pre-industrial levels as required by Race to Zero.
4. **Coordinate** commitments and actions across the financial system to support economy-wide transition, including the critical analytical tools and market infrastructure (such as credit rating agencies, auditors and stock exchanges) for financial institutions to implement their net zero strategies.
5. **Support** technical collaboration on substantive and cross-cutting issues that will accelerate the alignment of investment and lending with net zero.
6. **Advocate** for public policy that supports economy-wide transition to net zero.

Source: Glasgow Financial Alliance for Net Zero. UNFCCC External Press Release "New Financial Alliance for Net Zero Emissions Launches" (April 21, 2021).

5. International Collaboration & Carbon Markets

Article 6 of the Paris Agreement addresses “international collaboration” on meeting climate goals and broadly establishes frameworks for linking emissions-trading schemes between countries. It is one of the most complex portions of the “Paris Rulebook” and one of the key outstanding issues for signatories to agree upon. As a result, negotiating Article 6 implementation is one of the primary goals of COP26.

Operative paragraphs of Article 6 of the Paris Agreement:

1. **Article 6.2** provides an accounting framework for international cooperation, such as linking the emissions-trading schemes of two or more countries (for example, linking the European Union cap-and-trade program with emissions-reduction transfers from Switzerland). It also allows for the international transfer of carbon credits between countries.
2. **Article 6.4** establishes a central UN mechanism to trade credits from emissions reductions generated through specific projects. For example, country A could pay for country B to build a wind farm instead of a coal plant. Emissions are reduced, country B benefits from the clean energy and country A gets credit for the reductions.
3. **Article 6.8** establishes a work program for non-market approaches, such as applying taxes to discourage emissions.

“Robust international emissions markets developed by Parties to the UNFCCC could stimulate up to \$1 trillion of new capital investment towards developing countries, improve local sustainability results, and provide incentives for further technological innovation”

– *Findings from a joint report from the International Emissions Trading Association (IETA) and the University of Maryland*

Source: WRI “What You Need to Know About Article 6 of the Paris Agreement.” IETA. S&P Global, “COP 26: Paris Article 6 can generate \$1 trillion / year of capital flows by 2050: IETA” (October 27, 2021).

Carbon Pricing

Globally, there are 64 carbon pricing schemes (30 carbon markets and 34 tax schemes) which cover over 20% of global greenhouse gas (GHG) emissions. However, only eight of the programs currently have a high enough price to limit emissions to 2°C.

Overview of selected key carbon markets

Includes market-based mechanisms and taxes. Includes implemented and planned carbon pricing mechanisms.

California

- Cap-and-trade carbon market since 2013
- Covers industry, power, transport and buildings corresponding to 80% of region's emissions
- Trading limitations including a price corridor and holding limits

EU ETS

- Cap-and-trade carbon market since 2005
- Covers roughly 40% of EU emissions
- Covers industry, power and intra-EU aviation
- Upcoming reforms includes tighter cap and new sectors

China

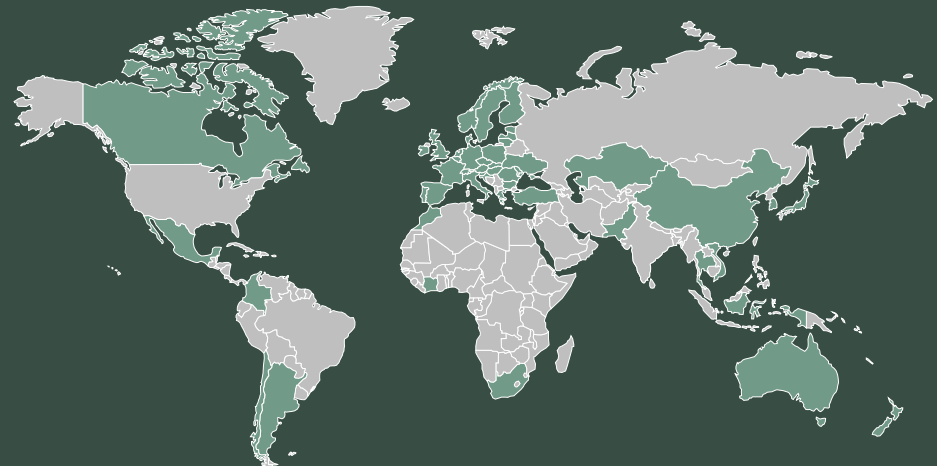
- Baseline-and-credit carbon market since 2021
- Covers power sector corresponding to 40% of region's emissions
- May not deliver absolute emission reductions

Carbon border adjustment mechanism (CBAM)

- EU plans to start its scheme in 2026
- Aims to protect from carbon leakage

Korea

- Cap-and-trade carbon market since 2015
- Covers industry, power, transport, waste, public sector and buildings corresponding to 74% of region's emissions
- Financial players can take part from 2021



Source: BloombergNEF "Carbon Market Outlook - Rising EU Carbon Prices" (October 12, 2021). MUFG, "COP26 - Great Expectations for Major Change" (October 2021, Ehsan Khoman).



US FSOC's Report on Climate-Related Financial Risk

6. Understanding the FSOC

Established by Title I of the Dodd-Frank Act in 2010, the Financial Stability Oversight Council (FSOC), empowers the US Treasury Secretary (as Chair), and a dozen of the country's most senior financial regulators, with preserving the financial stability of the United States. As mandated by President Biden's Executive Order in May, the FSOC just released the findings of its six month study on the inextricable links between climate risk and financial stability.

Voting Members



Janet Yellen
Secretary of the Treasury and
Chairperson of the FSOC



Jerome Powell
Chairman of the Board of Governors of
the Federal Reserve System



Michael J. Hsu
Comptroller of the Currency (OCC)



Rohit Chopra
Director of the Bureau of Consumer
Financial Protection (CFPB)



Gary Gensler
Chairman of the SEC



Jelena McWilliams
Chairperson of the FDIC



Rostin Behnam
Chairperson of the Commodity
Futures Trading Commission (CFTC)



Sandra L. Thompson
Director of the Federal Housing
Finance Agency (FHFA)



Todd M. Harper
Chairman of the National Credit
Union Administration (NCUA)



Thomas E. Workman
Independent member with
insurance expertise

Non-voting Members



Dino Falaschetti
Director of the Office of
Financial Research



Steven Seitz
Director of the Federal
Insurance Office



Eric A. Cioppa
State insurance commissioner



Charles G. Cooper
State banking supervisor



Melanie Senter Lubin
State securities commissioner

7. The FSOC's Report on Climate-Related Financial Risk

In May 2021, President Biden issued an Executive Order entitled "Climate-Related Financial Risk" in which he laid out his "whole of government" approach to identifying and mitigating climate risk. In response to that order, the FSOC produced a report with over 30 specific recommendations for regulators to identify and respond to physical and transition risks in the shift to a low-carbon economy.

Key recommendations in the FSOC's Report on Climate Related Financial Risk

Developing a Common Agenda

1. Financial Risk Assessment

Member agencies should use scenario analysis to assess climate-related financial risks

2. Filling Data and Methodological Gaps

Members should perform an internal inventory of currently available data and develop plans for acquiring necessary additional data. Members should also develop consistent data standards, definitions and relevant metrics to coordinate between regulatory agencies.

3. Enhancing Public Climate-Related Disclosures

Members should review existing public disclosure requirements and consider updating them to promote consistency, comparability, and decision-usefulness on climate-related risks and opportunities.

4. Building Capacity

Members should prioritize internal investments to expand capabilities in defining, identifying, measuring, monitoring, assessing and reporting on climate-related financial risks and their impact on financial stability.

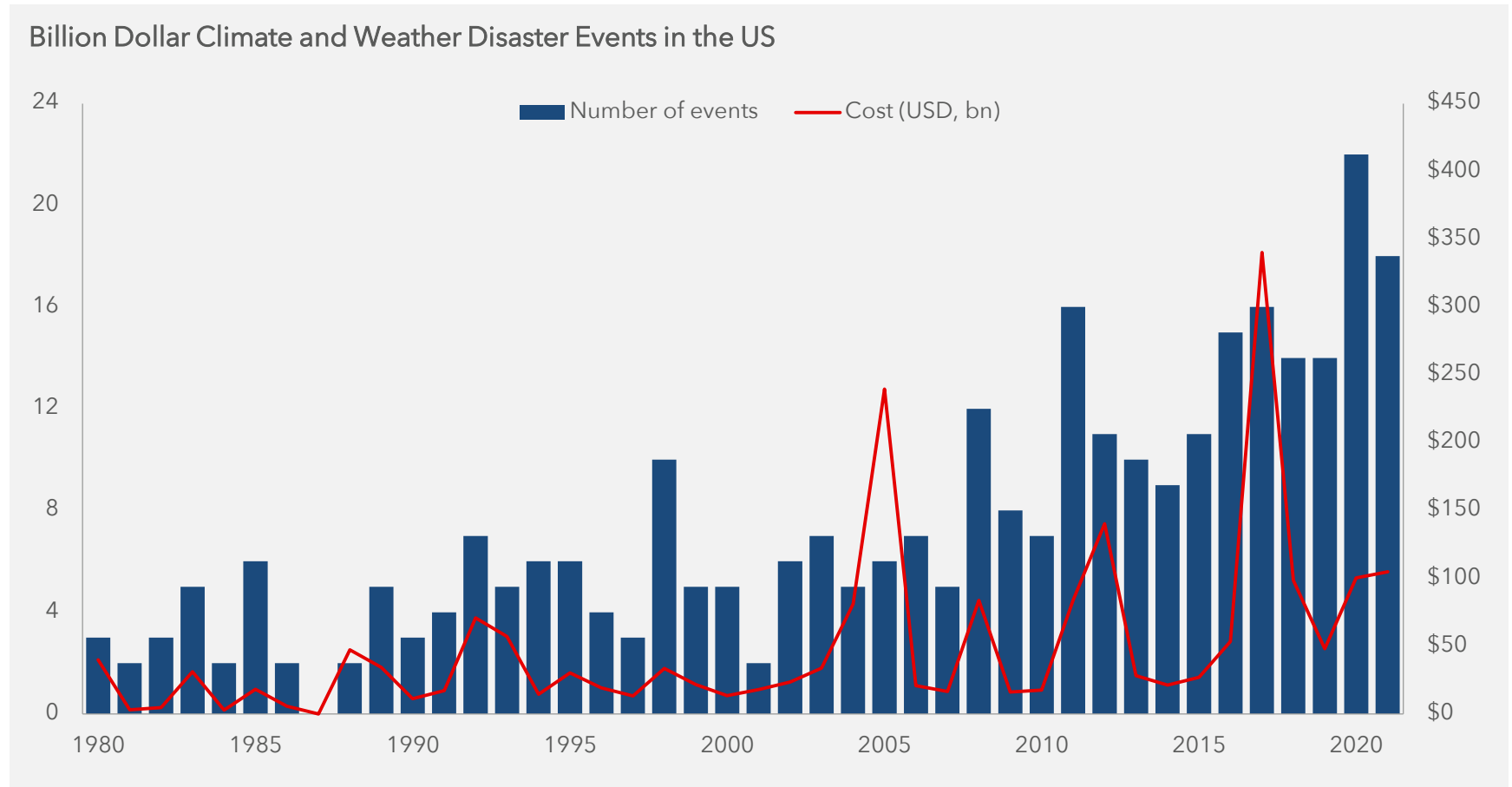
7. The FSOC's Report on Climate-Related Financial Risk

Additional Recommendations:

1. **Enhancing coordination** across member agencies by creating the Climate-related Financial Risk Committee within the FSOC
2. **Enhancing cooperation** in international forums by working closely with the Financial Stability Board, the Basel Committee on Banking Supervision, the International Organization of Securities Commissioners, the International Association of Insurance Supervisors, the Sustainable Insurance Forum, and the Network of Central Banks and Supervisors for Greening the Financial System
3. **Address the needs** of vulnerable populations by evaluating climate-related impacts and the impacts of proposed policy solutions on financially vulnerable, lower income, and underserved communities as well as communities of color
4. **Build on and accelerate existing efforts** by recognizing ongoing work by the SEC, Fed, CFTC, OCC and others

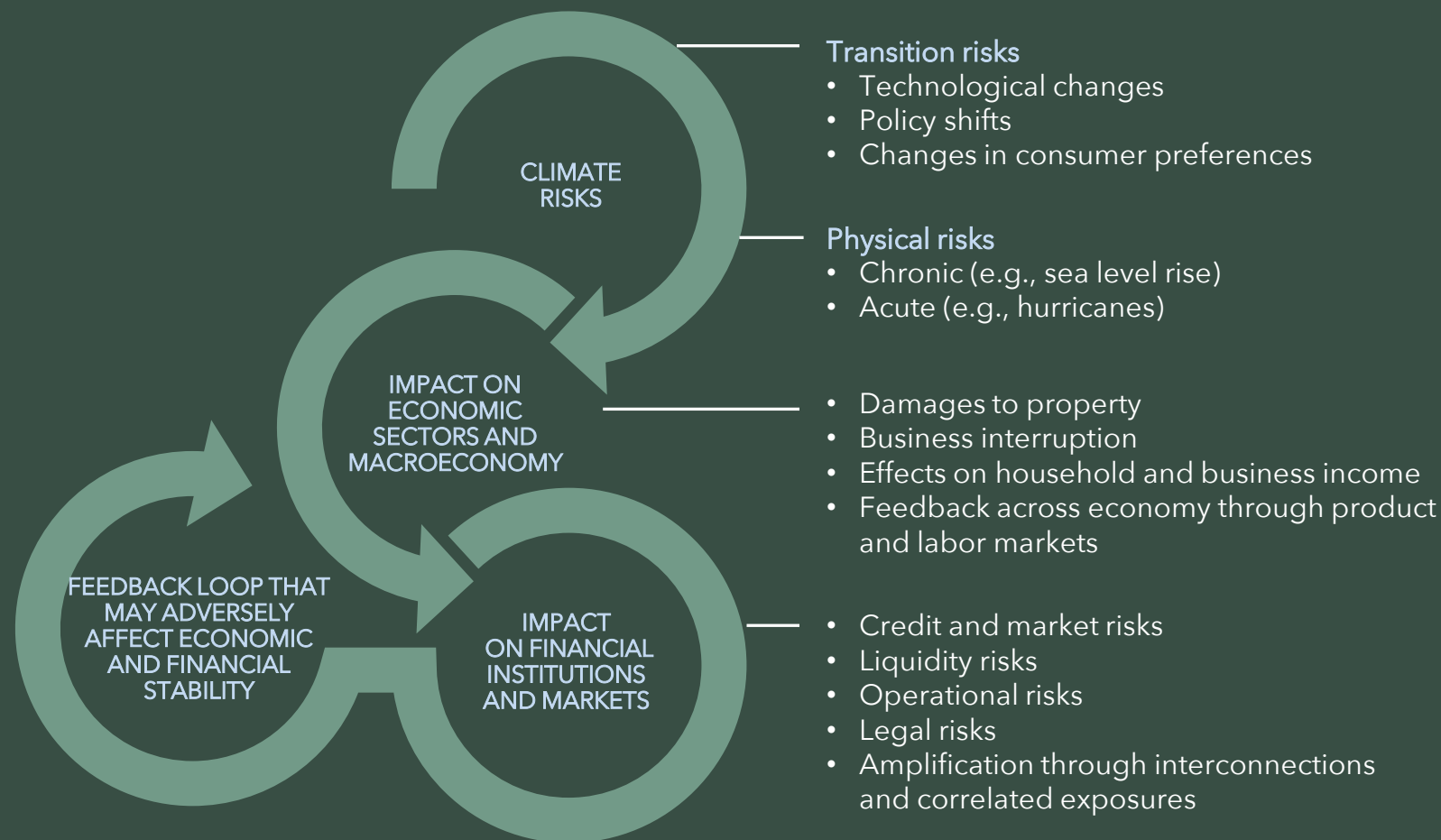
8. Recognizing Climate Risk as Financial Risk

In 2020 alone, there were 22 distinct climate events in the United States that cost in excess of \$1 billion, with aggregate damages close to \$100 billion. The FSOC's report was the first time the organization formally recognized climate risk as a threat to the US and global financial systems.



Source: (1) FSOC "Report on Climate-Related Financial Risk" 2021. Event counts and total cost estimates reflect weather and climate disaster events with costs exceeding one billion in CPI-adjusted 2020 dollars. NOAA NCEI, "Billion-Dollar Weather and Climate Disasters." (2021).

Linking Climate Risks to Financial Stability



Source: Figure created by FSOC. FSOC "Report on Climate-Related Financial Risk" 2021.

9. Financial Risk Assessment

Given the complexity and interconnectedness of climate-related physical and transition risks, the FSOC recommends a scenario analysis framework to assess the situation and develop next steps. Regulators will use this tool to develop clear guidelines and risk management standards for banks. Importantly, while scenario analysis is similar to stress testing, the report emphasizes this would be distinct from CCAR analysis.

Potential objectives and outputs of scenario analysis of climate related financial risks

Objectives	Participants & Frequency	Output
<ul style="list-style-type: none"> • Institution-level risk management • Supervisory or regulatory assessment of governance or risk • Analysis of financial stability or other systemic consequences 	<ul style="list-style-type: none"> • Individual financial institutions & annual or ongoing • Financial institutions and / or their supervisors & annual or less frequent • Financial institutions and / or a set of supervisors or agencies, including FSOC & less frequent 	<ul style="list-style-type: none"> • Internal risk management and disclosures • Supervisory evaluation of risk management and possible supervisory action • Assessment of the potential evolution and state of the financial system

Key design considerations in scenario analysis

Climate Risks Considered	Horizon of Analysis	Financial Risks Considered
<ul style="list-style-type: none"> • Transition risks • Chronic physical risks • Acute physical risks 	<ul style="list-style-type: none"> • Long term (10 to 30+ year): transition and chronic physical risks may evolve over decades • Medium term (3 to 10 years): evolving physical risks, as well as some transition risks, may impact within this horizon 	<ul style="list-style-type: none"> • Credit risks are most commonly considered for both transition and physical risks • Operational risks likely more tightly linked to physical risks • Legal and liquidity risks may link to both types of climate risk

Source: (1) FSOC "Report on Climate-Related Financial Risk" 2021.

Understanding Physical & Transition Risk

The FSOC emphasizes the importance of managing both physical and transition risks in the mitigation process and will look to capture both factors in their scenario analysis design

Drivers of Physical Risk	General Risk	Subcategories	
	<i>Extreme weather events</i>	<ul style="list-style-type: none"> • Hurricanes • Floods • Summer / winter storms 	<ul style="list-style-type: none"> • Heat waves • Wildfires • Hailstorms
	<i>Ecosystem impacts</i>	<ul style="list-style-type: none"> • Soil degradation • Surface water system changes 	<ul style="list-style-type: none"> • Marine system changes
	<i>Ecosystem shifts</i>	<ul style="list-style-type: none"> • Fisheries • Agriculture • Deforestation 	<ul style="list-style-type: none"> • Desertification • Population shifts / displacement • Biodiversity changes
	<i>Sea-level rise</i>	<ul style="list-style-type: none"> • Chronic sea-level rise 	<ul style="list-style-type: none"> • Sea or lake surges
	<i>Water scarcity</i>	<ul style="list-style-type: none"> • Droughts 	<ul style="list-style-type: none"> • Insufficient water supply

Drivers of Transition Risk	General Risk	Subcategories	
	<i>Public policy change</i>	<ul style="list-style-type: none"> • Clean energy transition • Pollution controls (e.g., GHG Caps) 	<ul style="list-style-type: none"> • Emissions taxes
	<i>Technological change</i>	<ul style="list-style-type: none"> • Clean energy technologies • Energy saving technologies • Clean transportation 	<ul style="list-style-type: none"> • Emissions removal or capture • Other green technologies
	<i>Changing investor and consumer demand</i>	<ul style="list-style-type: none"> • Investor demand or preferences for green investments 	<ul style="list-style-type: none"> • Consumer demand for green products
<i>Disruptive business models</i>	<ul style="list-style-type: none"> • New business models that can capitalize on low carbon technologies and disrupt existing business models 		

Source: (1) FSOC "Report on Climate-Related Financial Risk" 2021. Adapted from NGFS, Overview of Environmental Risk Analysis by Financial Institutions.

10. Enhanced US Climate Disclosures

In addition to recognizing the work the SEC has underway to develop new climate-specific disclosure requirements for public companies, the report also emphasizes possible new reporting standards that could impact private companies. The report encourages bank regulators to design enhanced reporting metrics for banks' financed portfolios. Any new regulations, may, in turn, require private companies provide their bank lenders with climate-related risk information.

Expectations for SEC mandated ESG disclosures

Emission disclosure: Scope 1 and 2 expected with possible Scope 3 inclusion as well

TCFD as a platform but adjusted for US context

Inclusion of **climate disclosures** in the 10-K

Information on **jurisdictional climate targets** and how that impacts foreign registrants

Possibly different **disclosure requirements by sector** (i.e., banking, insurance, transportation)

Verification process of corporate & investor "green", "sustainable" or "low carbon" claims

Inclusion of **scenario analysis outputs:** incorporate possible legal, market and economic changes, capture physical risk and transition risk

Disclosures supporting **forward looking commitments** (i.e., net-zero pledges)

Human capital management disclosures around worker safety, diversity, compensation and pay equity analysis

Qualitative disclosures on leadership strategy for managing climate-related risks and opportunities

Source: UN Intergovernmental Panel on Climate Change "Climate Change 2021: The Physical Science Basis". Environmental Finance "Key Takeaways from IPCC Report". New York Time The Daily "A Code Red for Humanity".

TCFD as Building Block

The FSOC report acknowledges TCFD as one of the leading frameworks currently used by companies structuring voluntary climate-related disclosures. The report recommends US regulators consider the four core elements of the TCFD framework as they develop new disclosure requirements.

Governance	Strategy	Risk Management	Metrics and Targets
<p>Disclose the organization's governance around climate-related risks and opportunities.</p>	<p>Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.</p>	<p>Disclose how the organization identifies, assesses, and manages climate-related risks.</p>	<p>Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.</p>
Recommended Disclosures			
<ul style="list-style-type: none"> a. Describe the board's oversight of climate-related risks and opportunities. b. Describe management's role in assessing and managing climate-related risks and opportunities. 	<ul style="list-style-type: none"> a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term. b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning. c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario. 	<ul style="list-style-type: none"> a. Describe the organization's process for identifying and assessing climate-related risks. b. Describe the organization's processes for managing climate-related risks. c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management. 	<ul style="list-style-type: none"> a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process. b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks. c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Source: (1) FSOC "Report on Climate-Related Financial Risk" 2021. TCFD, Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures.

MUFG's Global ESG Expertise

Americas



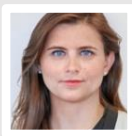
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Tom Joyce is a Managing Director and Capital Markets Strategist within MUFG's global capital markets and investment banking business. Based in New York, Tom heads a team that creates customized analytical content for multi-national S&P 500 companies. His team provides in depth analysis on the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Tom has over 25 years of Investment Banking experience in New York, London, Hong Kong, and San Francisco. Over the last 15 years, Tom created and built the Capital Markets Strategy role, advising corporate C-Suite executives (Boards, CEOs, CFOs, and Treasurers) on the pervasive macro forces driving markets. Tom also presents at dozens of corporate events each year including Board meetings, CEO ExCo sessions, CFO and Treasury off-sites, corporate leadership events and conferences.

Tom's educational background includes a year of study at Oxford University from 1991 - 1992, a Bachelor of Arts in Political Science from Holy Cross College in 1993, and a MBA from Kellogg Business School, Northwestern University in 2000.

Tom resides in New Canaan, CT with his wife and four sons, where he coaches youth basketball and serves on the Board of Trustees of the New Canaan Library, the Board of the New Canaan Football (Soccer) Club and the Holy Cross College President's Council.

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Hailey Orr is a Director in MUFG's Capital Markets Strategy group within the global capital markets and investment banking business. The team provides market based content for corporate clients to assist in strategic decision making. Focus areas include the impact of economic, political, public policy and regulatory dynamics on the US credit, foreign exchange, rates and commodities markets.

Hailey has a decade of Wall Street experience, including three years as a Consumer Sector Specialist in Equity Sales and seven years as a Capital Markets Strategist. Hailey is also a member of MUFG's Inclusion & Diversity Council and has devoted years to participating in and developing Wall Street recruiting programs.

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MUFG's Capital Markets Strategy Team

The MUFG Capital Markets Strategy team provides monthly publications and weekly policy notes, presenting to Boards and C-Suite executives, on a broad range of transformative themes driving the FX, rates and credit markets including: the COVID-19 recovery, ESG's acceleration, tax code policy changes, US-China decoupling, corporate strategy, geopolitical risk and central bank monetary policy.



MUFG's Capital Markets Strategy Team



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