Why Climate Finance?

Caroline Bradley[1]

This paper focuses not on the question "Why Climate Change?"[2] but on why finance is a significant focus of policy to address climate change.

Policy responses to climate change involve measures to mitigate climate change, such as measures to reduce carbon emissions (e.g. carbon taxes, altering subsidies) and measures to promote adaptation to climate change (e.g. building resilience to consequences of climate change).[3] Taxes and subsidies are clearly financial levers to influence decision-making, but I would like to distinguish carbon taxes[4] and subsidies for renewable energy[5] from climate finance. I use the term climate finance for ways in which climate change affects finance (meaning the activity of financial firms and markets and their regulation), and the ways in which finance may affect climate change.

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[1] Professor of Law, University of Miami School of Law, PO Box 248087, Coral Gables, FL, 33124. © Caroline Bradley 2023. All rights reserved.

[2] See, e.g., Intergovernmental Panel on Climate Change, Climate Change 2021: The Physical Science Basis, Working Group 1 Contribution to the Sixth Assessment Report, IPCC AR6 WG1 (Aug. 7, 2021); Glasgow Climate Pact at https://unfccc.int/documents/310475 .

[3] *See, e.g.*, https://www.imf.org/en/Topics/climate-change .

[4] *See, e.g.*, https://www.c2es.org/content/carbon-tax-basics/.

[5] *See, e.g.*, Felix Mormann, *Clean Energy Federalism*, 67 FLA. L. REV. 1621, 1624 (2016). Available at: http://scholarship.law.ufl.edu/flr/vol67/iss5/3 ("The debate over policy support for renewables across the globe and, more recently, in the United States, is dominated by two deployment policies—renewable portfolio standards (RPSs) and feed-in tariffs (FITs). RPSs create markets for solar, wind, and other renewables by requiring electric utilities to source a portion of the electricity they sell from renewable energy. FITs beckon renewable power generators with above-market rates for their output and guaranteed access to the electricity grid."(footnote omitted)) Cf. Aime Williams & Christine Murray, Biden's Electric Vehicle Plans Spark Outrage in Mexico and Canada, Financial Times (Nov. 15, 2021) (noting that Mexico and Canada consider that incentives for lectric vehicles in the US would breach the USMCA).

Adaptation measures, whether focused on diffusion of knowledge, the transition to sustainable land-use, or the construction of climate-resilient buildings, require investment.[6]

International and regional organizations emphasize the importance of addressing climate change. For example, the European Investment Bank has described climate change as "the greatest global challenge of our time."[7] Measures to mitigate climate change require international co-ordination as no single country or region can effectively address the issues. But, like many other transnational problems in search of transnational solutions, climate change affects different states and regions in different ways. Some areas are more vulnerable to the harms of climate change than others, and some states have a greater capacity to address issues of adaptation than others. Both factors have an impact on what states are willing and able to do in this context. There has also been an issue as to the relative burdens that should be borne by countries that industrialized long ago, and which have historically contributed significantly to climate change, and countries that have more recently industrialized. Issues of climate justice are problematic and complicated, on the international and also domestic levels.

At the United Nations Climate Change Conference in Glasgow in November 2021 (COP26) participants focused on reaching net-zero carbon emissions between 2050 and 2070, and recognized the need for financial support for developing countries for adaptation.[8] While recognizing that there is no multilaterally agreed definition of climate finance, the Conference encouraged participants to focus on just

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[6] *See, e.g.*, United Nations Environment Programme (UNEP), The Gathering Storm: Adapting to Climate Change in a Post-Pandemic World, Adaptation Gap Report 2021 (Nov. 2021) at https://www.unep.org/resources/adaptation-gap-report-2021; Stephane Hallegatte, Jun Rentschler & Julie Rozenberg, The Adaptation Principles: A Guide for Designing Strategies for Climate Change Adaptation and Resilience, World Bank (2020) at http://hdl.handle.net/10986/34780 .

[7] EIB Climate Strategy (Nov. 2020) at 1.

[8] UN Climate Press Release, COP26 Reaches Consensus on Key Actions to Address Climate Change (Nov. 13, 2021).

transition financing.[9] Many who have followed years of COP negotiations are concerned that there is insufficient commitment to climate justice.[10]

The Glasgow Climate Pact:

> *Calls upon* multilateral development banks, other financial institutions and the private sector to enhance finance mobilization in order to deliver the scale of resources needed to achieve climate plans, particularly for adaptation, and encourages Parties to continue to explore innovative approaches and instruments for mobilizing finance for adaptation from private sources.[11]

Public Sector financing of climate adaptation measures is provided by a range of different institutions, including the World Bank and International Bank for Reconstruction and Development,[12] the International Finance Corporation,[13] regional development banks,[14] and governments.[15] These public sector entities have issued

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[9] Decision -/CP.26, Matters relating to the Standing Committee on Finance at https://unfccc.int/documents/310480.

[10] *Cf.* https://climatejusticealliance.org/ .

[11] Glasgow Climate Pact at https://unfccc.int/documents/310475 .

[12] *See, e.g.*, Todd A. Eisenstadt, Ifeoluwa Olawole & Michael A. Toman, Climate Adaptation Finance in World Bank Economic Development Programs: The Challenges of Systemic Transformation via "Scaling Up," 13 Sustainability 10553 (2021)

[13] *See, e.g.*, Coffee Revival Project description at https://disclosures.ifc.org/project-detail/ESRS/41813/coffee-revival .

[14] *See, e.g.*, Inter-American Development Bank and Inter-American Investment Corporation, Vision 2025: Reinvest in the Americas: A Decade of Opportunity (Feb. 18, 2021) at ¶ 3.14 ("The IDB Group will also provide knowledge and innovation to support nationally determined contributions and long-term strategies as part of the process to set policies towards becoming low-carbon economies and be aligned with the Paris Agreement. By continuous mainstreaming climate-change across all its activities, the IDB Group should be a leader among multilateral development banks on the issue of climate resilience, and mitigation and adaptation must become a critical pillar of financing."); Multilateral Development Banks and International Development Finance Club (MDB-IDFC), Common

green bonds and sustainable bonds, raising funds from investors to fund their activities.[16] In the US, Fannie Mae has issued green bonds.[17] This is one response to the fact that public sector organizations do not have adequate resources to meet all of the needs for financing, and, therefore, turn to private investors and collaborations with private sector organizations.[18] Blended finance initiatives which combine public and private sector resources are another example of this public-private cooperation.[19] Blended finance for climate adaptation is similar to long-standing reliance on public private partnerships to fund infrastructure (which includes funding for renewable energy).[20]

Private sector financing is also evident in the development of financing vehicles such as green bonds, sustainability bonds, and sustainability linked loans. These instruments are meant to facilitate capital raising to finance green or

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Principles for Climate Mitigation Finance Tracking (2015); MDBs-IDFC, Lessons Learned from Three years of Implementing the MDB-IDFC Vcommon Principles for Climate Change Adaptation Finance Tracking (Nov. 2018).

[15] *See, e.g.*, Alexander Bisaro, Mark de Bel, Jochen Hinkel, Sien Kok & Laurens M. Bouwer, *Leveraging Public Adaptation Finance Through Urban Land Reclamation: Cases from Germany, the Netherlands and the Maldives*, 160 CLIMATIC CHANGE 671-689 (2020).

[16] *See, e.g.*, The World Bank Impact Report, Sustainable Development Bonds & Green Bonds 2020 (Jun. 2021).

[17] *See* https://capitalmarkets.fanniemae.com/sustainable-bonds/green-bonds?utm_campaign=esg-sf-esg-grebon-202109&utm_source=google-ad&utm_medium=cpc&utm_content=sem-sea-noa-gbndtra-p-n-inv-&utm_term=green%20bond .

[18] The Covid-19 pandemic has increased pressures on public finances. *See, e.g.*, OECD, Tax and Fiscal Policies after the Covid-19 Crisis (Oct. 14, 2021).

[19] *See, e.g.*, IFC, Blended Concessional Finance for Climate at https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/bf/focus-areas/bf-climate.

[20] *See, e.g.*, World Bank, Private Participation in Infrastructure (PPI) 2020 Annual Report (May 13, 2021).

sustainable activities. Green or sustainable financing could be aimed at adaptation measures or mitigation measures. And green or sustainable bonds can finance activities that are conducive to either adaptation or mitigation. Issuers of the green/sustainable bonds are incentivized to meet specific environmental/ sustainability targets through a reduction in applicable interest rates. A green bond issuer might promise to reduce issuer level carbon emissions in order to achieve a lower interest rate on borrowing. Although the issuer may incur additional costs relating to certifications and reporting and disclosure the issuer may benefit from a lower interest rate and a credible signal of a commitment to environmental issues. However, it is not entirely clear how beneficial these instruments are to the environment. For example, do they encourage sustainable behavior that would not otherwise occur?[21] Is there a risk that green bonds facilitate greenwashing (presenting behavior that is not in fact sustainable as if it were)? Although industry groups have developed principles for green bonds and related instruments,[22] there are gaps in the availability of sustainability performance indicators and in verification of the achievement of sustainability benefits.[23] The European Union (EU) is developing a detailed taxonomy to establish uniform rules within the EU for sustainable activity,[24]

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[21] *See, e.g.*, Jochen Schmittmann & Chua Han Teng, How Green are Green Debt Issuers?, IMF Working Paper No. 2021/194 (Jul. 23, 2021) at https://www.imf.org/-/media/Files/Publications/WP/2021/English/wpiea2021194-print-pdf.ashx .

[22] International Capital Market Association, Green Bond Principles: Voluntary Process Guidelines for Issuing Green Bonds (Jun. 2021) at https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/. See also, International Capital Market Association, Green Project Mapping (Jun. 2021); Climate Bonds Initiative, Climate Bonds Taxonomy (Sep. 2021) at https://www.climatebonds.net/files/files/Taxonomy/CBI_Taxonomy_Tables-08A%20%281%29.pdf.

[23] *See, e.g.*, Torsten Ehlers, Diwen (Nicole) Gao & Frank Packer, a Taxonomy of Sustainable Finance Taxonomies, BIS Paper No 118 (Oct. 2021).

[24]Regulation (EU) 2020/852 on the Establishment of a Framework to Facilitate Sustainable Investment, OJ No. L 198/13 (Jun. 22, 2020); Commission

and a number of other jurisdictions have developed or are working on similar initiatives. The EU, Argentina, Canada, Chile, China, India, Kenya and Morocco established the International Platform on Sustainable Finance [25] to connect policy-makers working on these issues. The International Platform on Sustainable Finance has begun work to compare the EU and Chinese taxonomies,[26] and to compare ESG disclosures in various jurisdictions.[27] The World Bank has published a guide for states on developing national green taxonomies.[28] In November 2021 the IFRS (the body which develops international standards for financial reporting) announced the establishment of the International Sustainability Standards Board,[29] and the ISSB has been working since then on developing standards.

These examples of various projects around the development of standards and principles for green or sustainable finance involve a range of different governmental and non-governmental actors. And, as in other areas of policy-making, affected actors and groups (business groups and environmental groups) lobby and attempt to influence the development of the rules and standards. Whereas in the context of banking regulation generally, the lobbying efforts of banks and bank trade groups

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Regulation Establishing Technical Screening Criteria, COM(2021) 2800 final.

[25] https://ec.europa.eu/info/business-economy-euro/banking-and-finance/sustainable-finance/international-platform-sustainable-finance_en. The membership has expanded to include Australia, Hong Kong, Indonesia, Japan, Malaysia, New Zealand, Norway, Senegal, Singapore, Switzerland and the United Kingdom.

[26] International Platform on Sustainable Finance, Common Ground Taxonomy—Climate Change Mitigation, Instruction Report (Jun. 3, 2022).

[27] International Platform on Sustainable Finance, State and Trends of ESG Disclosure Policy Measures Across IPSF Jurisdictions, Brazil, and the US (Nov. 4, 2021) at https://ec.europa.eu/info/sites/default/files/business_economy_euro/banking_and_finance/documents/211104-ipsf-esg-disclosure-report_en.pdf.

[28] World Bank Group, Developing a National Green Taxonomy (Jun. 2020).

[29] *See* https://www.ifrs.org/groups/international-sustainability-standards-board/.

often seem to be successful[30] because of limited engagement by sophisticated and organized groups representing the interests of bank customers,[31] the climate finance context is different. There are a number of sophisticated organizations dedicated to examining sustainability standards, and the behavior of financial actors with respect to sustainability.[32]

A number of factors contribute to the development of green/sustainable finance rules and standards. For the EU, in particular, it is clear that the taxonomy and other regulatory measures relating to financial regulation are designed to change behavior, and accelerate the transition to a low or zero carbon economy. And the EU describes itself as a leader in these efforts.[33] But addressing greenwashing, and ensuring that if investors want to invest in climate friendly investments they are provided with accurate information on which to base their decisions, is another important objective of regulation, so rules about disclosures of climate related information are a component of securities regulation.[34]

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[30] *Cf.* Deniz O Igan & Thomas Lambert, Bank Lobbying: Regulatory Capture and Beyond, IMF Working Paper No. 19/171 (Aug. 9, 2019) at https://www.imf.org/-/media/Files/Publications/WP/2019/wpiea2019171-print-pdf.ashx.

[31] *Cf.* Craig Calhoun, Occupy Wall Street in Perspective, 64 British Journal of Sociology 26 (2013).

[32] *See, e.g.,* https://reclaimfinance.org/site/en/home/ ; https://www.i4ce.org/home/ ; https://www.globalwitness.org/en/ ; https://www.allianceforcorporatetransparency.org/ .

[33] European Climate Law, Regulation (EU) 2021/119, OJ No. L. 243/1 (Jul. 9, 2021) Recital 16 ("The Union is a global leader in the transition towards climate neutrality, and it is determined to help raise global ambition and to strengthen the global response to climate change, using all tools at its disposal, including climate diplomacy.")

[34] *See, e.g.,* Proposed Corporate Sustainability Reporting Directive, COM)2-021) 189 final (Apr. 21, 2021). The Council of the EU approved the Directive in November 2022. See https://www.consilium.europa.eu/en/press/press-releases/2022/11/28/council-gives-final-green-light-to-corporate-sustainability-reporting-directive/.

Climate change has increased weather-related risks, leading to increased levels of hurricanes and cyclones, flooding and wildfires (physical risks). These risks affect corporations whose activities may be affected by property damage, by power outages resulting from adverse weather events, or by disruptions to supply chains. Insurance companies that insure these properties and activities are also affected by changes in weather-related risks, as are banks that are lenders to affected companies,[35] and asset managers whose funds include securities issued by affected companies. Providers of housing finance, or trade credits need to consider the risks that climate change involves for their business. Financial regulators, then, must focus on the risks that climate change creates for the businesses they regulate, alongside other risks they monitor.[36]

Another set of risks relates to changes in environmental regulation and/or investor expectations that require or encourage businesses to move to a net zero, low or zero carbon environment (transition risks). Divestment campaigns have focused on advocating divestment from fossil fuels and, in particular, from coal.[37] Financial institutions have responded by announcing changes in their investment or lending policies.[38] There is a concern that at some point fossil fuel assets will become stranded assets —assets with no value—and that this will have a negative impact on

[35] *See, e.g.,* Ceres, Financing a Net Zero Economy: The Consequences of Physical Climate Risk for Banks (Sep. 2021).

[36] *See, e.g.,* Basel Committee on Banking Supervision, Climate-Related Risks—Measurement Methodologies (Apr. 2021); European Central Bank, the State of Climate and Environmental Risk Management in the Banking Sector (Nov. 2021).

[37] *See, e.g.,* Julie Ayling & Neil Gunningham, *Non-state Governance and Climate Policy: The Fossil Fuel Divestment Movement*, 17 Climate Policy 131-149 (2017); Auke Plantinga & Bert Scholtens, *The Financial Impact of Fossil Fuel Divestment*, 21 Climate Policy107-119 (2021).

[38] *Cf.* Jasper Jolly, BlackRock Holds $85bn in Coal Despite Pledge to Sell Fossil Fuel Shares, The Guardian (Jan. 13, 2021).

the financial system.[39] Some commentators on divestment campaigns have argued that, if responsible investors who care about climate change divest from fossil fuel companies, the investors who remain, or who take their place, are likely to be less keen on reducing climate risks.[40]

Changes in regulation are also going to have an impact on lending to and investing in a range of businesses other than fossil fuel companies. Climate related regulation may be upstream, focusing on producers of fossil fuels, but it should also be downstream, focusing on users of fossil fuels. One major use of fossil fuels is in the production of plastics which leads to plastic pollution.[41] But other industries, such as agriculture, trasnsport (road, air and sea), chemicals and cement are significant producers of carbon emissions.[42] And, as pressures to move to a low carbon environment are imposed throughout the economy, the implications for financial firms are greater. And one set of risks relates to liabilities arising from climate change litigation.[43]

Regulators concerned to ensure the safety and soundness of the financial firms

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[39] *See, e.g.,* Lloyds of London, Stranded Assets: the Transition to a Low Carbon Economy, Emerging Risk Report 2017 (2017) at 4 ("While asset-stranding is a natural feature of any market economy, it is more significant when related to environmental factors because of the scale of stranding that could take place. Changes to the physical environment driven by climate change, and society's response to these changes, could potentially strand entire regions and global industries within a short timeframe, leading to direct and indirect impacts on investment strategies and liabilities.")

[40] *Cf.* Thomas Biesheuvel, Investors Pushed Mining Giants to Quit Coal. Now It's Backfiring, Bloomberg Green (Nov. 8, 2021).

[41] *See, e.g.,* https://blogs.worldbank.org/endpovertyinsouthasia/6-reasons-blame-plastic-pollution-climate-change .

[42] *See, e.g.,* https://ourworldindata.org/emissions-by-sector .

[43] *See, e.g.,*Joana Setzer, Catherine Higham, Andrew Jackson & Javier Solana, Climate Change Litigation and Central Banks, European Central Bank Legal Working Paper Series No. 21 (Dec. 2021).

they regulate will want to ensure that the firms are accurately identifying and providing for the climate-related risks in their business.[44] But financial regulators are also concerned to address issues of systemic risk—risks to the financial system as a whole rather than risks to individual financial firms.[45]

Climate finance and its regulation affects a range of different actors and activities. Central banks and various financial regulators (securities, banking, insurance, pension funds, derivatives)[46] are concerned about the overall health of the financial system and the ways in which climate change affects the system and individual financial firms. Financial firms face issues of regulatory compliance, which are complex in a changing regulatory environment, but also reputational issues, which may affect their ability to attract new, especially younger, customers. People and businesses seeking to raise finance, or invest, are also affected by the changing regulatory and business environment.

Underlying all of these issues is the question of how to measure carbon emissions along supply and use chains, and highly technical issues relating to defining green or sustainable activities. Where net-zero carbon emissions are concerned, there are questions about what should count as eligible offsetting activity. And all of these issues fall within a more general landscape in which ESG (environmental, social, governance) issues are prioritized by governments, regulators, businesses and investors, at least in terms of rhetoric, if not in reality. Ensuring

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[44] *See, e.g.,* Basel Committee on Banking Supervision, Climate-Related Risks—Measurement Methodologies (Apr. 2021).

[45] *See, e.g.,* Patrick Bolton, Morgan Despres, Luiz Awazu Pereira Da Silva, Frédéric Samama & Romain Svartzman, The Green Swan: Central Banking and Financial Stability in the Age of Climate Change (Jan. 2020).

[46] Different jurisdictions organize financial regulation differently. Some jurisdictions, such as the US, adopt a sectoral approach to financial regulation where separate regulatory bodies regulate different parts of the finscial system. Other jurisdictions adopt a single regulator or twin peaks (separate regulators for prudential and conduct regulation) model.

biodiversity is one component of this broader landscape,[47] as well as social issues such as workers' rights and human rights.

This paper has focused on why it makes sense to think in terms of climate finance, but we should also be aware (and will look at this issue during the semester) that, in particular in the US, there is a significant pushback against "woke capital." While the Biden administration seeks to address climate change in a rang of different ways, policy-makers in a number of states in the US, including Florida, are seeking to penalize firms that say they are adopting changes in investment policies to address climate change.[48]

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[47] The Economics of Biodiversity: The Dasgupta Review (Feb. 2021) at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/962785/The_Economics_of_Biodiversity_The_Dasgupta_Review_Full_Report.pdf .

[48] *See, e.g.*, Brooke Masters & Patrick Temple-West, Vanguard Quits Climate Alliance in Blow to Net Zero Project, Financial Times (Dec. 7, 2022) ("Vanguard is pulling out of the main financial alliance on tackling climate change at a time when Republicans in the US have stepped up their attacks on financial institutions that they say are hostile to fossil fuels.")