

# Banks and Climate Governance

(in part)<sup>1</sup>

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## ABSTRACT

*Major banks in the United States and globally have begun to assert an active role in the transition to a low-carbon economy and the reduction of climate risk through private environmental and climate governance. This Essay situates these actions within historical and economic contexts: It explains how the legal foundations of banks' sense of social purpose intersect with their economic incentives to finance major structural transitions in society. In doing so, this Essay sheds light on the reasons why we can expect banks to be at the center of this contemporary transition. This Essay then considers how banks have taken up this role to date. It proposes a novel taxonomy of the various forms of private environmental and climate governance emerging in the U.S. banking sector today. Finally, this Essay offers a set of factors against which to normatively assess the value of these actions. While many scholars have focused on the role of shareholders and equity in private environmental and climate governance, this Essay is the first to position these steps taken by banks within that larger context.*

## INTRODUCTION

Major banks, both in the United States and globally, have begun to assert an active role in the transition to a low-carbon economy and the reduction of climate risk. All six major U.S. banks have committed publicly to achieve global net-zero emissions by 2050 and to align with the goal of the Paris Agreement on Climate Change to limit global warming to well below 2°C. Particularly significant among these commitments are the declarations, such as that of J.P. Morgan Chase & Co. that these banks will not only reduce their own operational emissions but also that they will achieve net-zero emissions with respect to their lending portfolios. Likewise, Citibank has adopted the “2025 Sustainable Progress Strategy,” committing \$250 billion to finance and promote a smooth transition to a low-carbon economy through investments in renewable energy, clean technology, and sustainable agriculture and transportation, among other industries. Other major U.S. banks, including Bank of America, Goldman Sachs, and Wells Fargo have made similar commitments not only to reduce emissions from their operations but also to finance “green” technologies and industries that will promote a smooth transition to a low-carbon economy and to reduce climate risk in their lending portfolios.

These building blocks of bank strategy that orient capital flows toward more sustainable investments and push debtors to be more environmentally responsible represent significant new forms of private environmental governance. In other words, rather than government regulators

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dictating compliance with environmental standards to address climate risks and promote sustainable economic activities, banks themselves are acting as change agents with respect to their lending portfolios in the first instance and also, in some cases, in regard to their securities underwriting and asset management businesses...

These actions by banks resemble the actions of firms in other industries that have sought to reduce emissions and promote environmentally positive actions throughout their value chain. In the non-financial corporate space, Walmart has used its market power to insist that its suppliers report on and reduce their GHG emissions. Through Project Gigaton, Walmart aims to avoid one billion metric tons (one gigaton) of carbon dioxide emissions in its supply chain by 2030. Technology firms have also made public commitments. Google reports that it has been carbon neutral since 2007, and aims to be carbon-free in its operations by 2030. Other major firms in diverse industries have likewise required their suppliers to disclose and reduce GHG emissions through the CDP (formerly Carbon Disclosure Project) Supply Chain initiative. In addition, there has been a great deal of scholarly focus on the role of shareholders in advancing the transition to a low-carbon economy and in reducing climate risk. Legal scholars have argued that shareholders have an especially important role to play in reducing climate risk and shaping firm behavior, particularly, “universal owners” like Vanguard, State Street, and BlackRock, which collectively hold almost a third of all public equity.

Thus, the notion that a firm would seek to reduce greenhouse gas emissions within its value chain as a form of private environmental governance is not new. However, unlike other major corporations—even those as dominant in their industry as Walmart or Vanguard—banking institutions, as sources of private environmental and climate governance, have several unique features that warrant special focus. First, banks hold a special place in society as financial intermediaries. Second, banks play their capital-allocation role in reaction to a particular set of economic incentives—to mitigate financial risk and to accelerate high-potential projects—which motivate them to facilitate the kinds of structural change required for transition to a low-carbon economy. Third, banks, as one type of private creditor, also possess significant contractual power over the operations and cashflow—and thus behavior—of their borrowers. Regardless of what position one may take on the authority of U.S. financial regulators to address climate change through public law—a subject on which there remains disagreement—the forms of private environmental governance that banks are adopting to address climate change are central to their legal, economic, and historic roles. This Essay is the first to offer a descriptive and analytical account of the tools that banks have at their disposal to lead and innovate in the private climate governance space, as well as to offer normative criteria against which to evaluate the impact of these tools...

### *Private Climate Governance and the Transition to a Low-Carbon Economy*

Private climate governance, a form of environmental governance, is a growing phenomenon, with private actors like NGOs, standards certification bodies, industry associations, and firms themselves adopting new measures to address climate change. Private climate governance includes not only efforts by private actors to reduce greenhouse gas emissions but also efforts to facilitate the transition to a low-carbon economy and to promote adaptation and resilience to a changing climate.

The Intergovernmental Panel on Climate Change (IPCC) has concluded that both the gradual physical effects of climate change—including sea level rise, increases in ocean and land surface temperatures, biodiversity loss, and ocean acidification—as well as extreme weather events like storms and wildfires would be worse if warming were to reach 2°C than if it were capped at 1.5°C. To achieve this goal of limiting warming to 1.5°C, the IPCC has concluded that global greenhouse gas emissions must be reduced to net zero by around 2050. The Paris Agreement has likewise made clear that avoiding the most catastrophic impacts of climate change would require a global transition away from burning fossil fuels by the middle of the twenty-first century. This transition to a low-carbon economy thus requires not only mitigating (reducing) GHG emissions by shifting away from fossil-fuel generated power but also promoting the use of clean, renewable energy sources. Article 2(1)(c) of the Paris Agreement specifically links this goal to sustainable finance through the mechanism of “[m]aking finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.”

The transition to a low-carbon economy in this short time frame would be “unprecedented” in scale and would require “rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems.” More concretely, the International Energy Agency (IEA) has suggested a pathway to net zero that focuses in the first instance on clean power and transportation. A 2021 IEA report notes the need for “improvements in the efficiency of industrial equipment and heavy transport” and the importance of “lay[ing] the groundwork” and developing “viable business models” for new clean energy technologies like low-carbon liquids and gases and carbon capture. Notably, the report underscores the importance of private finance and debt in particular—explaining that, in their “climate-driven scenarios, over 70% of clean energy investments are privately financed, especially in renewable power and efficiency.” The IEA acknowledges public finance as key for supporting grid infrastructure and posits that public finance may draw private capital, which could then become the main financial enabler for technologies at early stage of readiness and, when the time comes, for scale.

With respect to the costs of this transition, including investments in new technologies, estimates depend upon numerous assumptions; however, recent estimates range from the hundreds of billions of dollars well into the trillions. For example, the IPCC has determined that “[a]dditional annual average energy-related investments for the period 2016 to 2050 in pathways limiting warming to 1.5°C compared to pathways without new climate policies beyond those in place today are estimated to be around 830 billion USD<sup>2010</sup>.” The IEA has estimated,

Annual investment in transmission and distribution grids expands from USD 260 billion today to USD 820 billion in 2030. [To increase the needed number of public electric vehicle charging stations requires an] annual investment of almost USD 90 billion in 2030 . . . . [A]nnual investment in CO<sub>2</sub> pipelines and hydrogen-enabling infrastructure increases from USD 1 billion today to around USD 40 billion in 2030.

In addition to the direct costs of investment required to facilitate this transition to a low-carbon economy, markets and market actors will bear costs as a result. For example, the IEA finds that fossil fuel assets are likely to be “stranded” when they cannot be used. While the transition does present certain costs, there are significant benefits, especially if it proceeds in an orderly fashion. For example, the Global Commission has estimated that the global shift to a “low-carbon, resilient

economy” also presents significant opportunities, with at least \$26 trillion in economic benefits through 2030. And the IEA estimates the creation of fourteen million jobs in 2030 in clean energy, as compared to losses of five million jobs in the fossil fuel industry...

In financial services and related industries, major global insurers and re-insurers, including U.S.-based insurer Chubb, have announced that they would decline to provide coverage for coal-based businesses, including extraction and coal-fired power plants. In the United States, credit ratings agencies have begun to use their influence to force clients to address climate risks through ratings downgrades and other measures. For example, Moody’s, one of the three major credit rating agencies in the United States, purchased a stake in Four Twenty Seven, a firm that analyzes climate risk to firms and governments. In 2017, Moody’s downgraded the city of Cape Town, South Africa, when a drought threatened the municipal water supply. Likewise, in a 2017 review of its corporate credit ratings from 2015 to 2017, Standard & Poor’s (S&P Global) identified 717 cases in which environmental and climate concerns were “relevant to [a firm’s] rating” and 106 cases in which those factors—“both event-driven and those occurring over a longer time horizon—resulted in a change of rating, outlook, or a CreditWatch action.” In 2020, S&P Global issued a report noting that sixty percent of companies in the S&P 500 Index “with a market capitalisation of \$18 trillion hold assets that are at high risk of at least one type of climate-change physical risk.” Of these, even factoring in variation across industries, the data demonstrate that the most significant risks are “heatwaves, wildfires, water stress, and hurricanes linked to increasing average global temperatures.” Sectors facing substantial climate risks include real estate investment trusts, firms in the materials sector owning mines and processing plants, and utilities facing significant wildfire risk. S&P Global’s Trucost has initiated a Climate Change Physical Risk Analytics program to assist firms in understanding physical climate risks to assets. In addition, S&P Global notes that S&P 500 firms, including utilities, face significant transition risks as a result of increasingly stringent climate regulation and the potential for carbon pricing...

## **BANKS AND PRIVATE GOVERNANCE**

In many ways, private governance arrangements among financial market actors co-evolved with, and indeed supported, the development of financial markets themselves. Accounts of private governance in finance date back to the seventeenth century, when stockbrokers in London and Amsterdam gathered in coffee houses to agree upon rules and norms of trading, thus creating the precursor to the modern stock exchanges. Financial market leaders continue to develop—and rely upon—mechanisms of private governance to solve complex problems that confront the financial system today. Banks also play a public role. They supply credit, thereby creating money, and funnel economic aid from governments to people in times of crisis—and, as such, they operate at the center of economic life and in a highly regulated context. Given this unique mix of private incentives and public purpose, among the various private actors seeking to tackle climate change, banks are beginning to find themselves at the center of the debate...

### *Banks and Their Public Policy Roles*

Banks have public policy in their legal DNA. When Congress created the national banking system, it gave national banks the power to create currency—bank notes—in order to address growing anxiety surrounding the young nation’s economic wellbeing. The National Bank Acts of 1863 and

1864 (NBA) delegated some sovereign power to “coin money and regulate the value thereof” to banks. Contemporaneous accounts of this legislation make plain that Congress designed the NBA in this way because it wished for the private sector’s help with the money supply, so as to bolster public confidence in a newly established federal currency...

After the creation of the Federal Reserve (the Fed) in 1913, the U.S. central bank, rather than private banks, would issue paper money going forward; national bank notes issued by banks between 1864 and 1913 would be taken out of circulation. However, to this day, banks continue to “create money” in the form of demand deposits that are an equally lawful and valued medium of exchange alongside paper (fiat) money and coin. This is simply to say that, when a bank today makes a loan, it effectively issues demand deposits in exchange for a promise to repay (a promissory note or a loan receivable). Those deposits enter circulation and become interchangeable with fiat currency and, as such, the bank has “created” money in the process of making a loan. Again, that private banks would create money—and therefore assist the state in monetary affairs—was always an intentional feature of the banking system, first with national bank notes and today with demand deposits. In modern times, the Fed’s monetary policy depends on the ability and willingness of private banks to create money. The Fed, for instance, adjusts the interest it pays on banks’ reserves or otherwise seeks to influence interest rates to incentivize banks to lend more or less, precisely in order to affect the amount of “money” banks put in—or take out of—circulation.

Banks assist the central bank and fiscal authority in crisis times as well. In recent years, banks have served as conduits for the Treasury and the Fed to deliver economic aid to the financial and real economies amid the economic crises of 2008 and 2020. In 2008, the government, via the central bank, stood up a number of facilities to stabilize the financial system after a macroeconomic shock (a precipitous drop in housing prices) so as to avoid negative spillover effects from the financial system to the real economy. Via these various lending facilities, the Fed provided emergency liquidity to primary dealers. It also supported the commercial paper funding markets and money market funds, thereby propping up a mix of banks, nonbanks, investment funds, and corporations that relied on commercial paper to fund their short-term operating expenses, like payroll.

In 2020, the government partnered once again with the banking system to support the real economy even more directly—that time, in response to the national emergency precipitated by a global health pandemic. The Fed reincarnated many of the 2008 facilities for primary dealers and investment funds but, this time, went even further (at Congress’s request) to directly assist the real economy (i.e., “main street”). The centerpiece was the Main Street Lending Program, a conglomerate of five facilities, each of which aimed to provide loan assistance to small-and medium-sized businesses and nonprofits. Banks also indirectly supported other main-street-oriented facilities. The Paycheck Protection Program (PPP)—a major part of the Coronavirus Aid, Relief, and Economic Security Act (CARES)—was designed to aid small businesses in covering payroll and utilities, as well as mortgage and rent payments. The PPP, administered by the Small Business Administration (SBA), allowed a number of different lenders—ranging from credit unions to certain fintechs—to make loans to small businesses for payroll and operations. To facilitate the uptake of the program, Congress also gave the Federal Reserve banks new, temporary authority to provide liquidity to member banks that would, in turn, lend to these SBA-approved

institutions taking their PPP loans as collateral. The Reserve banks delegated the origination of PPP-backed loans to the banking systems in order to “provide relief expeditiously.”

Because banks stand at the center of the economy, issue deposits, and interface with monetary and fiscal policy, they require the public’s trust. As former Bank of England Governor Mark Carney once remarked, banks not only require a formal bank charter—a legal license—to operate, they also require a “social licence” to sustain their operation. The ability of banks to win and keep the public’s trust is not only a matter of their individual private interest, it is also—as with their other quasi-public roles—a public policy concern. Without public trust in banks, markets will not function smoothly, leaving the stability of the financial system at risk.

Thus, in light of the economic ramifications of climate change—both for banks’ own balance sheets and those of their clients—it may come as no surprise that banks have begun to consider climate change in their ordinary course of business...

### *Bank Measures to Mitigate Credit Risk*

Banks are in the business of making loans and they naturally have incentives to profit from those loans. By extension, banks have incentives to generate robust mechanisms for guarding against losses on their credit assets—measures to mitigate risk before and during the life cycle of the loan...

Banks’ core economic function is to optimally allocate capital. Inasmuch as the channeling of savings to productive use is a critical economic service, it is also a business model. Thus, in pursuit of the profit associated with their capital allocation role (the spread between the cost of money loaned and the cost of funding), banks have strong incentives to avoid excessively risky loans. If a borrower is unable to repay a loan in whole or in part, the bank must write down that loan on their balance sheet—that is, to mark a reduction in the value of that asset. A reduction in asset value translates directly to a loss of earnings and a loss of profit on that loan.

There are also a range of secondary consequences from risky loans that negatively impact a bank’s business. For one, a decline in an asset’s value (again, because it is not repaid in whole or part) will increase that bank’s leverage. A higher leverage ratio is quite likely to concern the bank’s own creditors, which may trigger increases in the cost of the bank’s wholesale funding. In terms of a bank’s retail funding, a bank whose asset values are declining may also concern depositors, who may withdraw their funds (these retail sources of funding might “run” in an extreme scenario of asset value declines). Additionally, where a bank’s asset values decline significantly and in large proportion, bank supervisors and regulators may become involved—like the Office of the Comptroller of the Currency (OCC) for national banks and the Federal Reserve for bank holding companies. Both the Bank Holding Company Act and the Federal Deposit Insurance Act require depository institutions to conduct themselves in a safe and sound manner, which includes an obligation that banks maintain a relatively stable balance sheet.

The stability of a bank’s balance sheet—its overall operation—is also of great public interest. A wealth of empirical research teaches that big bank failures have severe macroeconomic effects, triggering crises that can cause sluggish GDP growth and low employment. For that reason, the government has created certain public safety nets for banks to guard against this possibility. Some

may also implicate the public fisc (i.e., the taxpayer). It is on that ground that bank regulators—the Fed, the OCC, and the Federal Deposit Insurance Corporation (FDIC)—have a basis to supervise and examine banks’ balance sheets, governance, and operations. Accordingly, not only do banks operate out of some sense of duty to keep the public from harm, but they also seek to establish their own mechanisms for demonstrating their ability to lend prudently to avert additional regulatory scrutiny or intervention.

Banks have developed three kinds of ex ante risk-mitigation mechanisms to ensure their prudent lending: the loan underwriting process, debt covenants, and active monitoring of borrowers during the life cycle of a loan. The first of these mechanisms is the loan underwriting process itself, through which banks appraise the creditworthiness of a borrower based on a number of factors—past repayment history, business model, projections of future cash flow, and projections of ability to repay. The bank also relies on the personal relationships with borrowers that it has cultivated over a number of years of repeated interactions with (most) of its corporate customers. These personal relationships add qualitative color to the banks’ quantitative diligence, giving them a fuller picture of a borrower’s ability to repay. Finally, and relatedly, banks have vast information networks of potential downstream investors in any loan a bank makes. If a bank makes a loan with the intent to securitize that loan, it will first gauge the market’s appetite by consulting its network of potential buyer–investors. This also gives the bank some insight into the prudence and profitability of the credit investment.

The second risk-mitigation technique involves setting loan terms, including debt covenants. Standard loan terms may involve collateral requirements and specify the loan’s term length, amortization, size, guarantor requirements, and pricing (interest rate). Loan terms adjust in stringency according to the creditworthiness of the borrower—the riskier the borrower, the less attractive the financing terms, and vice versa. Banks have also developed a practice of imposing a variety of debt covenants to control borrower behavior after the loan is made. Other scholars have noted the extent to which creditors can exercise control over companies via debt covenants.

There are two main kinds of debt covenants. Financial covenants typically relate to the borrower’s accounting information and may specify, for example, upper limits on debt or requirements on cash flow maintenance. Restrictive covenants, meanwhile, tend to pose restrictions on the borrower’s investment decisions or activities. Lenders can use covenants to gain the power to exercise control over their borrowers by, among other things, reshaping C-suite management, revamping capital structures, and limiting the ways in which a borrower’s management uses cash and other assets. Covenants might also be written to allow the lender to restrict a company from borrowing further or by requiring the company to seek the bank’s permission before paying dividends or buying back shares, issuing new debt, or changing their capital structure. Bank lenders, as such, can use debt covenants liberally to gain and retain power in the governance structure of their borrowers.

Third, banks actively monitor the borrower during the life cycle of the loan. Banks will assess on an ongoing basis the borrower’s business as a way of informing their understanding of the quality (i.e., value) of the credit asset as it sits on the balance sheet. Monitoring can morph into enforcement; should a borrower default on a loan term or covenant, the bank may have a series of

self-enforceable remedies written into the loan document, such as a right to accelerated repayment, foreclosure, or seizure of any collateral that had been required.

These various risk mitigation techniques have two main implications for banks' role in a transition economy. First, these measures can motivate environmentally responsible behavior on the part of corporate borrowers that need access to bank credit. The need to access credit in the first instance can motivate would-be corporate borrowers to remain mindful of their carbon footprints or efforts to reduce their carbon footprints. The ongoing monitoring, which is accompanied by the self-help afforded to banks via covenants, can ensure borrowers remain faithful to their carbon commitments through the life cycle of a loan. Second, on a more macro level, banks' underwriting, debt discipline, and monitoring roles suggest that they have a unique skillset in identifying promising technologies that can build bridges to a low-carbon economy...

### *Bank Measures to Invest in Economic Transformation*

Banks' economic incentives not only involve prudence; they also include the desire to lend strategically. That is, banks are motivated to identify promising industries, technologies, and ideas, and to then finance them so that they can scale (and profit). The promise of profit—and repeat business among successful entrepreneurs—which is inherent in financing entrepreneurship and innovation, has meant that banks have played a dominant role in facilitating major structural and industrial transformations in the past. This transition, too, may well be a pivotal moment of industrial transformation in which banks are poised to play a crucial role moving forward.

...As one of the most influential economists of the twentieth century, Joseph Schumpeter, remarked, “[t]he essential function of credit . . . consists in enabling the entrepreneur . . . to force the economic system into new channels.” In the absence of private sources of finance, the alternative would be government financing, which might either be unavailable or problematic for other reasons. Consistent with Schumpeter's observation that economic transitions require capital to finance them, most of the major industrial revolutions of the nineteenth and twentieth centuries relied in varying degrees on credit and advisory services provided by banks. In studying these industrial transformations, financial economists and economic historians have discerned the various ways in which massive industrial evolution depends on the banking sector...

...[V]arious empirical, theoretical, and descriptive accounts of banks' role in industrial transformation suggest that banks are engines of economic transformation (through capital in the first instance and through informational intermediation and entrepreneurial advice in the second); that banks often play a sorting role in identifying high-potential innovators and backing them; and that banks tend to frame, and sometimes anchor, the shape and pace of the transformation. This financial history thus suggests that modern-day banks can play a crucial role as capital providers to transition technology and infrastructure; as promoters of these industries; and as screens for projects or borrowers that could help (or hinder) the pace of transition. On the whole, therefore, banks' motivation to finance structural transformation may also be seen as an outgrowth of private governance....

## **CLIMATE GOVERNANCE: A TAXONOMY**



...Our analysis of numerous industry-authored documents, press statements, and SEC disclosures reveals that banks are adopting a range of private governance measures to address climate change. These forms of private climate governance converge around eight types of measures that have been adopted by at least two major U.S. banks. These measures include: (1) reducing the firm's own footprint, (2) portfolio analysis and negative screens, (3) financing clean technology, (4) providing equity/advisory services, (5) climate philanthropy, (6) developing climate "best practices" through voluntary associations, (7) developing market mechanisms for carbon emissions reductions, and (8) improving reporting and disclosure of climate risk.

Beyond merely describing these eight different measures, however, our review reveals that they fall into four overarching analytical categories. The first category includes measures that seek to reduce the banks' own emissions in their operations and promote transparency within those operations. The second category includes measures by which banks seek to influence borrower behavior, including banks' decisions to decline or reduce funding for certain kinds of carbon-intensive projects. These measures include portfolio analysis, carbon emissions targets, and negative screens. The third category includes measures that banks undertake to positively accelerate or facilitate the transition by dedicating financing, investing equity, offering advice, and engaging in climate philanthropy. The fourth category includes a variety of arrangements of voluntary association to solve the complex, transitional problem of climate change—working in groups to develop collective efforts to establish carbon pricing, set standards around disclosure, and brainstorm best practices.

This Essay offers this taxonomy to help demonstrate the ways in which banks' efforts at climate governance either share features with those of other major firms or have unique features that set them apart. While the first category—reducing a firm's own emissions—is not unique to banks, the remaining categories are either largely unique to the banking industry or otherwise have specialized features as a result of their being initiated by banks...

### *Category One: Banks' Operational Emissions and Sustainability*

The first overarching category of private climate governance by banks includes efforts to reduce banks' own operational emissions by examining the carbon footprint of their everyday operations. Many have stated their intention to examine their own carbon footprint and the sustainability of their everyday operations. Generally speaking, this type of commitment to reducing emissions from operations focuses on what are known as Scope 1 emissions that arise onsite and Scope 2 emissions that arise from purchased electricity and heat. It could include such measures as changing light bulbs to LEDs and purchasing renewable energy to power the firm's daily operations. In addition, some firms include limited Scope 3 emissions in such commitments—namely, employee business travel—which is the most easily calculated form of Scope 3 emissions.

The banks undertaking these commitments for their own operations have largely framed them as a goal to achieve carbon neutrality. For example, JP Morgan achieved its previous commitments of (1) becoming carbon neutral in its own operations and employee business travel and (2) sourcing renewable energy for 100% of its global power needs by 2020. In 2017, the bank also announced that it would retrofit over 4,000 branches with new energy management technologies to reduce

electricity and gas usage by fifteen percent. As of December 2020, JP Morgan installed these energy management systems in over 3,400 branches...

These unilateral commitments by major firms to switch to renewable energy or to achieve carbon neutrality in their operations are not unique to the banking industry but echo major commitments by firms in many industries. Accordingly, the remaining categories evidence the more unique role that banks play facilitating the transition to a low-carbon economy.

### *Category Two: Influencing Borrower Behavior to Reduce Portfolio Emissions Through Portfolio Analysis and Negative Screens*

Many major U.S. banks have committed to examining the carbon footprint of their financing commitments—to ensure a target level of emissions across their lending portfolios by a certain date—and declining to offer credit for certain kinds of fossil fuel projects. For example, JP Morgan stated in October 2020 that it would “establish intermediate emission targets for 2030 for its financing portfolio and begin communicating about its efforts in 2021. The Firm will focus on the oil and gas, electric power and automotive manufacturing sectors and set targets on a sector by sector basis.” In this regard, JP Morgan plans to “evaluate its clients’ carbon intensity, which tracks emissions relative to unit of output.” These most recent efforts build on prior commitments by the firm to restrict its financing of coal mining and coal-fired power plants, as well as to prohibit financing of new oil and gas development in the Arctic, unless those plants use carbon capture technology. Other major banks, including Bank of America, Citigroup, Goldman Sachs, Morgan Stanley, and Wells Fargo, have likewise committed not to fund oil and gas exploration in the Arctic. They, along with other firms, have also committed to not directly financing the construction of new coal-fired power plants and conducting enhanced due diligence before extending financing to existing coal-fired power plants. According to Morgan Stanley, such due diligence considerations include: “technology and emissions controls used, impacts on biodiversity and community, and the company’s framework for and track record in managing greenhouse gas and other emissions, waste and wastewater, health and safety, human rights and compliance with regulations and international standards.”

With respect to portfolio analysis, Citibank has committed to measure, manage, and reduce the climate risk and impact of its lending portfolio, and to use “climate scenario analysis and stress testing of our portfolios to understand the differentiated impacts (or resilience) our clients exhibit to physical or transition climate risk.”

... [M]any financial institutions in the United States and globally have adopted the Equator Principles (EPs), which constitute an important risk management framework and set of standards created by the financial industry to address the environmental and social impacts of banks’ lending portfolios for major projects. To date, 118 financial institutions in thirty-seven countries have adopted the EPs and qualify as “Equator Principles Financial Institutions” (EPFIs)...

The Equator Principles go a step beyond pure information disclosure, however, as they recognize that “negative impacts on Project-affected ecosystems, communities, and the climate should be avoided where possible”; that if such impacts are “unavoidable[,] they should be minimised and mitigated”; and that if “residual impacts remain, clients should . . . offset environmental impacts

as appropriate.” At worst, “offsetting” requires some mitigation of those impacts, with the goal of ensuring that projects on both sides of the Equator meet basic standards of environmental and social responsibility.

### *Category Three: Accelerating the Low-Carbon Transition*

In addition to the “negative screening” and monitoring techniques described above, banks are taking positive steps to commit capital and expertise to the transition to a low-carbon economy. These positive steps to accelerate the transition include providing financing to clean energy and low-carbon projects, providing advising services to clients, and promoting climate philanthropy.

*1. Providing Funding for Clean-Energy, Sustainable Projects.* — Banks are not only keen to reduce emissions from their portfolios and screen out fossil fuel projects, but they are also affirmatively committing to fund new climate-related technologies and research in a variety of ways. This category of private climate governance includes commitments to fund sustainable projects and emerging climate technology, and commitments to underwrite or invest in green bonds.

For example, Morgan Stanley “seeks to mobilize \$250 billion toward low-carbon solutions between 2018 and 2030,” including through “cleantech and renewable energy financing, sustainable bonds, and other relevant transactions and investments.” Similarly, in 2018, “Wells Fargo announced a commitment to lend or invest \$200 billion to environmentally sustainable businesses and projects by 2030, with 50% focused on transactions that directly support the transition to a low-carbon economy, including renewables, energy-efficiency technologies, green buildings, green bonds, and low-emission vehicles.”

*2. Providing Equity and Advice.* — Most of the banks studied here are in fact bank holding companies that have subsidiaries with capacity to invest equity (like asset managers) and provide underwriting and advisory services. Some of these institutions have tapped these parts of their businesses to commit to making equity investments in sustainable or climate-related ventures and/or to provide entrepreneurial advice to early-growth companies that need capital and guidance on how best to scale.

HSBC, for instance, plans to “[b]uild one of the world’s largest natural capital managers—to mainstream natural capital as an asset class, and invest in activities that preserve, protect and enhance nature over the long-term” and thus has created “a joint venture called HSBC Pollination Climate Asset Management.” At JP Morgan, the firm has launched an ESG Group to “advise clients on reducing their carbon emissions and respond to increased interest in ESG investing,” as well as an Energy Transition Team “to provide strategic and financial advice to corporate clients on M&A transactions that support their carbon optimization objectives.” In similar spirit, Citigroup has established a new “\$250 Billion Environmental Finance Goal to accelerate the transition to a low-carbon economy.”

*3. Climate Philanthropy.* — In some cases, banks are also donating to third-party organizations as part of their philanthropic programs to promote climate innovations. These efforts are strategically

distinct from equity investments. A bank's equity (and other) investments to facilitate transition and support sustainability are tied to its revenue-generating function, and so they will be guided by a bank's risk limits and appetite, balance-sheet constraints, and diligence requirements. Some climate-related endeavors will fall outside the net. A dedicated corporate social responsibility (CSR) policy or philanthropy program could in theory fund a wider range of projects. Maintaining CSR programs gives banks more flexibility.

These forms of bank initiative stand in contrast to the financing measures listed above because the banks take no equity stake in these third-party organizations. For example, HSBC has launched a new initiative in this regard, earmarking \$100 million to "scale climate innovations," while JP Morgan has committed to \$200 billion in financial support to advance the objectives of the United Nations Sustainable Development Goals (SDGs), including through climate-related finance, as well as social and economic development. These three forms of action by banks leverage their unique role in providing not only capital but also advice within their value chains to promote the transition to a low-carbon economy.

#### *Category Four: Voluntary Associations and Best Practices*

Finally, banks do not always act alone. Indeed, to address issues that affect the entire industry—such as ethics—banks have worked together within voluntary industry associations and informal working groups to determine best practices and industry standards. Banks are likewise working in concert with others through such associations to facilitate the transition to a low-carbon economy.

*1. Brainstorming Best-Practices and Industry Standards.* — A number of banks are engaging in collaborative activities, ranging from informal working groups to more formal associations, to develop ideas and, in turn, best practices for contributing to transition collectively as an industry. Wells Fargo, for example, established in 2019 "a cross-functional Climate Change Working Group, which leverages internal expertise, leading climate science and assumptions, and external resources to enhance understanding of the implications of climate change on our business and to make recommendations to company and line-of-business leaders with regard to policies and procedures that advance climate-risk management across the enterprise in a coordinated and strategic manner."

*2. Developing Market Mechanisms.* — Banks have also been discussing, and advocating for, various market mechanisms that may address climate change. The most developed idea for a market mechanism involves the adoption of a price on carbon. Carbon pricing can take a number of different forms, including "a carbon tax or fee, or a cap-and-trade system that depends on government allocations or permits." The basic idea is that, whether set by governments or markets, CO<sub>2</sub> emitters are charged for each ton that they release through a tax or fee. As industry analysts point out, "Either way, carbon pricing takes advantage of market mechanisms to create financial incentives to lower emissions by switching to more efficient processes or cleaner fuels."

While many scholars and firms have called for the adoption of a carbon tax, the fact that banks are now supporting this public policy strategy is strategically important, as they are likely to be involved in creating trading mechanisms for cap-and-trade regimes or markets for carbon credits; other nonfinancial companies are also likely to look to banks as corporate role models when it

comes to the adoption of market mechanisms such as these. Among the other banks that have supported the idea of a carbon tax, Banco Santander, one of the founding members of the Climate Leadership Council, has advocated for a carbon dividends framework to counteract climate change.

3. *Reporting and Disclosure.* — While the above measures have involved the restriction or channeling of funds to facilitate a transition to a low-carbon economy, banks have also been focused on questions of reporting and disclosure. Current SEC rules surrounding public company disclosure require publicly traded firms—not just banks—to disclose “material” risks to investors and the public in annual and quarterly reports, as well as when certain specific events occur, like mergers. The Supreme Court has defined a fact to be “material” if there is “a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the ‘total mix’ of information made available.” SEC Regulation S-K requires firms to make certain disclosures related to environmental risks, including the cost of compliance with environmental laws, material capital expenditures, material pending legal proceedings, and material risk events. In 2010, the SEC issued guidance explaining how certain physical and operational climate-related risks can be “material,” and thus ought to be disclosed. But this guidance has not yet resolved the matter. On the one hand, guidance is merely guidance, not regulation; as such, some contend that firms are not required to engage in a particular manner of climate-related disclosures in their public filings. On the other side are those who argue that the guidance is insufficiently demanding as a substantive matter and that the SEC needs to require meaningful, standardized climate disclosures. Firms do, however, often engage in more descriptive disclosures through their own sustainability reports or through platforms like the CDP. Some scholars and commentators have thus called for promulgation of clear, harmonized disclosure standards for public filings.

The call for improved public disclosures is growing louder, and banks are taking action. In part, this includes improved disclosures of their own material climate risks. Citigroup, for example, has taken steps in this direction in its 2019 Form 10-K—the annual report issued to investors as required by the SEC—published in February 2020. In that report, Citigroup mentions that it has incorporated environmental factors, such as “climate risk assessment and reporting criteria for certain obligors, as necessary.” According to its public filing, Citigroup considers and evaluates factors including “consideration of climate risk to an obligor’s business and physical assets and, when relevant, consideration of cost-effective options to reduce greenhouse gas emissions.” Citigroup also discusses at considerable length the ways in which it perceives climate to present medium-and long-term risks to its business, and how it plans to respond. Likewise, Goldman Sachs, BNY Mellon, and Wells Fargo now include climate risk as part of their discussion of risk factors, as seen beginning with their 2019 Form 10-K.

In addition to improving their own disclosures, banks are joining associations that are calling for improved public disclosures more broadly... To be sure, the issue of climate disclosure is not unique to banks— many other public companies likewise face calls to report more information about their efforts to address climate change. But there are reasons to see particular value in banks’ efforts to disclose their climate issues and initiatives voluntarily. For one, it is often said that banks are “special.” This is because most of society depends on the services banks provide and, at the same time, is vulnerable to a bank’s distress in ways distinct from other companies.

Taken together, this range of private climate governance mechanisms and arrangements is quite broad, and the four categories echo those ways in which banks have adopted private governance in other contexts... Banks are adopting measures that seek to influence borrower behavior; they are adopting measures to finance and facilitate a major infrastructure transition; they are working in voluntary associations to solve complex, transitional (and transnational) problems; and finally, they are looking inward to their own operations.

## **NORMATIVE IMPLICATIONS AND CHALLENGES**

### *Assessing Private Environmental and Climate Governance*

Legal scholarship to date has offered a set of normative criteria against which to measure different forms of private environmental governance. These general criteria can just as easily apply to climate governance by banks. First among these is effectiveness: namely, whether the tool will actually achieve its stated goal. In the climate context, it is specifically important to understand whether the private governance tool has the potential for transnational impacts (rather than a purely local impact), given the global nature of the climate crisis. A related criterion includes the tool's ability to stimulate innovation (in contrast to some forms of public law that mandate the use of specific technologies). In the context of the actions taken by banks described and discussed above, these criteria relating to the actions' effectiveness, ability to stimulate innovation, and transnational impacts are largely empirically testable. Because they are emerging and, in some cases, financing long-term projects, we do not offer conclusions here but instead several hypotheses. In particular, we offer the hypothesis that private climate governance by banks will promote global solutions to the climate crisis and not merely domestic ones. And we also anticipate that these new forms of financing and climate philanthropy will promote technological innovation. These are, of course, merely hypotheses that must be tested through empirical study.

There will also be continuing conversations about the convergence of ESG and economics. In particular, investors will—at least in part—evaluate the success of the measures in terms of their consistency with the bank's business objectives. Those banks that can best accomplish their sustainability goals, as well as their economic goals (e.g., the return on any given deal), will likely be seen as success stories in front of their peers. Ultimately, banks will need to continue to do well financially if they are to maintain a runway for expanding their climate initiatives and shareholder buy-in.

There are also other, more normatively laden, criteria against which to evaluate private environmental and climate governance. They include questions of whether particular tools are efficient (comparing their costs and benefits), as well as the fairness of the distribution of those costs and benefits, which has implications for environmental and distributive justice. These too, require empirical testing, and it is likewise too soon to speculate. It is worth noting, however, that there is substantial literature on climate justice and the distributional implications of a transition to a low-carbon economy.

Still other criteria for evaluation relate to the process by which a standard or private governance tool is developed, as well as its ongoing use: accountability, transparency, and durability. In the general private governance context, public statements of actions, commitments, and standards, as

well as third-party certifications, can promote accountability, transparency, and legitimacy, while unilateral actions that can easily be reversed may do the opposite or may increase the risk of greenwashing. How easily the measure or action can be reversed or undone likely stands in an inverse relationship to how quickly it can be put into place. These process-based criteria can sometimes be assessed—at least in part—before the consequences of a particular initiative are known. In many cases, the banks’ public statements and commitments are likely to render them more durable (and certainly more transparent) than purely private commitments, especially those statements made in public regulatory filings as compared to press releases. Likewise, collective industry commitments, such as those through voluntary associations, tend to have more process-based safeguards than unilateral actions. However, some tools employed by banks require a measure of confidentiality, such as specific loan covenants, proprietary underwriting criteria, or specific advice to portfolio companies. While some examples of private climate governance may be less transparent than others, it is worth noting that this does not necessarily affect their effectiveness, efficiency, or implications for environmental and distributive justice. Again, these normative criteria raise issues that must be tested empirically. Finally, given the newness and long-term nature of these commitments, it remains to be seen whether they will be durable far into the future.

### *How Does Debt Compare to Equity?*

While banks have been active in the climate space, so, too, have asset managers. Many institutional investors have made considerable commitments to address climate change issues as they arise in connection with their equity investments in various portfolio companies. Observing this notable development, a sizable body of scholarly literature has focused on the impact of these equity holders. This Essay, meanwhile, offers a parallel account of bank debt to complement the equity-focused literature. It thus seems fitting to conclude with some preliminary thoughts on how bank debt compares to equity in regard to climate-related corporate governance. Ultimately, the Essay concludes that debt and equity have different strengths and weaknesses as forms of private climate governance, and that both are important actors in the transition to a low-carbon economy.

As this Essay urges, bank debt can and does discipline its borrowers. As debtors to a bank, corporate managers must be disciplined in their own investments—the borrower must be sure that returns on their projects will be sufficient to cover the cost of interest expenses (at least). The consequence of failing to be so disciplined could be bankruptcy and reputational harm. Debt also often comes with strings attached, called covenants, that can impose a panoply of restrictions on borrower behavior (and accompanying remedies for a bank should those promises be breached).

Equity holders have different levers. Large shareholders can threaten “exit,” that is, to divest their fund’s equity holdings in a particular company as a means of “persuad[ing] companies to act in a more socially responsible manner.” As Eleonora Broccardo, Oliver Hart, and Luigi Zingales have argued, “Divestment and boycotts cause the market value of a dirty firm to fall, leading some value-maximizing managers to switch to the clean technology.” Asset managers, as large shareholders, can also exercise their “voice” in ways likely to induce managerial change. In the simplest example, a “Green Fund” can market its ability to put socially responsible proposals on a shareholder ballot as a feature of their fund, and investors may choose to invest in that fund for its ability to push a climate-friendly set of priorities on the corporations in which the fund invests.

Each of these mechanisms for exercising influence and control over companies has its limits. Exit and voice—though powerful—are imperfect. Threats of exit may be effective for minority shareholders only to the extent they attract public attention and can inflict reputational harm from a shareholder’s actions. As for voice, these strategies go only so far as the equity holder—the “speaker”—either holds a controlling stake in a firm or is able to persuade a sufficient number of other equity holders of the value of the proposal to behave in a more environmentally responsible manner. Indeed, not all shareholder proposals pass. In contrast, while banks could of course decline to lend money to a borrower in the first instance, once they have issued a loan, banks can only call the loan (demand full payment) on the basis of predetermined contractual terms.

The limits of bank debt are somewhat different. Perhaps most importantly, the stringency of debt covenants waxes and wanes with the economic environment. As recent years have shown in other contexts, strong economic environments tend to usher in a relaxation of covenants, as borrowers tend to have the economic upper hand when credit conditions are easy. As such, covenants designed and imposed in one time period can always be renegotiated, or ignored and unenforced, in a later period...

As a general matter, some would say that creditors and equity holders possess roughly equivalent power. Where climate governance is concerned, it is difficult at present to conclude which of these corporate governance levers is more effective—exit and voice for portfolio managers or terms, covenants, and monitoring for the banks. The deciding factor for climate governance may well be the proximity or ongoing nature of the relationship, not the mechanism of exercising control. Compared to debt, equity offers a more direct nexus to managerial decision making—because equity holders are the owners of an asset, they can directly impose or require strategic or operational changes. Because equity holders have certain rights of ownership, including the ability to elect directors to a firm’s board and to employ shareholder voting on substantive proposals, they can directly require strategic or operational changes. A creditor, meanwhile, is one step removed. While a bank can impose screens or covenant restrictions in a loan, it is not the ultimate owner of the company or the asset. In terms of changes to business operations on a more immediate basis, then, equity holders may be the higher-voltage driver of corporate climate governance.

Still, it is too soon to tell. In both equity and bank debt spaces, climate-driven initiatives are in their early days. Both are worthy of attention, as both banks and asset managers are likely to be key players in this space. Just as banks and funds often complement each other in the supply of credit, they are likely to complement each other in addressing climate change. Synergies are already emerging... The comparative advantages of debt and equity holders in adopting private climate governance must be understood and considered as parts of a panoply of responses to climate issues that are all important to deploy. This Essay fills some gaps specifically surrounding measures that banks have adopted toward climate governance, which are newly underway.

## **CONCLUSION**

There is little doubt that questions of how banks can and should address climate change will occupy the agendas of board and shareholder meetings in the months and years to come. To be sure, the role of banks in the transition to a low-carbon economy is highly complex. Banks have a social aspect to their purpose, as evidenced by history, economics, and the law. They must intermediate



credit responsibly and in view of risk, while also minding the wealth and welfare of their shareholders. They also have strong private incentives to tackle head-on the economic challenges implicated by climate change. This unique mix of private incentives and public ethos has placed banks front and center in the transition to a low-carbon economy. This Essay draws attention to the foundations of this role for banks, and creates a framework for understanding how banks are fulfilling this role and where they might turn next.