

Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Bank of America is one of the world's leading financial institutions, serving individual consumers, small and middle-market businesses and large corporations with a full range of banking, investing, asset management and other financial and risk management products and services. The company provides unmatched convenience in the United States, serving approximately 66 million consumer and small business clients with approximately 4,300 retail financial centers, including approximately 2,200 lending centers, 2,400 financial centers with a Consumer Investment Financial Solutions Advisor and 1,700 business centers; approximately 16,600 ATMs; and award-winning digital banking with more than 37 million active users, including approximately 28 million mobile users. Bank of America is a global leader in wealth management, corporate and investment banking and trading across a broad range of asset classes, serving corporations, governments, institutions and individuals around the world. Bank of America offers industry-leading support to approximately 3 million small business owners through a suite of innovative, easy-to-use online products and services. The company serves clients through operations across the United States, its territories and approximately 35 countries. Bank of America Corporation stock (NYSE: BAC) is listed on the New York Stock Exchange. (As of June 30, 2019.)

At Bank of America, we are guided by a common purpose to make financial lives better through the power of every connection. We deliver on this through a strategy of responsible growth and a focus on environmental, social and governance leadership. Through these efforts, we are driving growth—investing in the success of our employees, and helping to create jobs, develop communities, foster economic mobility and address society's biggest challenges—while managing risk and providing a return to our clients and our business.

As evidenced by the most recent United Nations Intergovernmental Panel on Climate Change's Fifth Assessment Report and the United States government's Fourth National Climate Assessment, urgent action is needed to address climate change and prevent its increasingly devastating impacts from accelerating further. At Bank of America, we recognize that climate change poses a significant risk to our business, our clients and the communities where we live and work.

As one of the world's largest financial institutions, Bank of America has a responsibility and an important role to play in helping to mitigate and build resilience to climate change by using our expertise and resources, as well as our scale, to accelerate the transition from a high-carbon to a low-carbon society. In alignment with more than 190 countries, we support the Paris Agreement on climate change, its commitment to take action to keep global temperature rise this century to below 2°C above pre-industrial levels, and its efforts to limit the temperature increase to no more than 1.5°C. Doing so will require changes in all sectors of our economy, particularly the transformation of critical areas like energy, power, transportation and real estate. Bank of America will mobilize an additional \$300 billion in capital by 2030 through its Environmental Business Initiative. This third commitment increases the company's investment in low-carbon business activities as part of its focus on deploying capital for responsible, sustainable growth. Through lending, investing, capital raising, advisory services and developing financing solutions, this new commitment will drive innovation and help to accelerate the transition to a low-carbon, sustainable economy. The \$300 billion goal brings Bank of America's total commitment to more than \$445 billion since 2007, when the company issued its first Environmental Business Initiative. Bank of America has deployed more than \$126 billion over the past 12 years in support of environmental business efforts across the globe. In 2013, Bank of America issued its second Environmental Business Initiative commitment with a goal to deploy \$125 billion by 2025. The company will achieve this commitment by the end of 2019, six years ahead of schedule.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Row 1	January 1, 2018	December 31, 2018	No

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

Australia
 Brazil
 Canada
 China
 France
 Germany

India
Ireland
Italy
Japan
Mexico
Russian Federation
Saudi Arabia
Singapore
South Africa
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board-level committee	The Corporate Governance Committee (CGC) of the Board of Directors has ultimate responsibility for overseeing management of climate change-related risks and opportunities. As stated in its Charter, this Committee is responsible for periodically reviewing the company's strategy, policies and practices regarding environmental, social and related governance (ESG) matters that are significant to the company. The board receives updates from the Global ESG Committee, which is the management-level committee responsible for significant ESG activities. Climate change oversight is assigned to the CGC because it is included within the scope of ESG matters that are significant to the company.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The Global ESG Committee meets at least four times a year and reports to the Corporate Governance Committee (CGC) of the Board of Directors. The chair of our Global ESG Committee discusses ESG topics with the CGC during scheduled meetings. During 2018, ESG topics were discussed at three of seven scheduled CGC meetings. The discussions included an update on the bank's approach to the Task Force for Climate Related Financial Disclosure recommendations and proposed updates to our Environmental and Social Risk

	Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Policy Framework. ESG metrics are included in our Executive Management team's performance measurement dashboard. This team comprises all direct reports to the CEO. The metrics include for example progress towards our \$125 billion environmental business goal. The Global Environmental Group which tracks this goal provides a quarterly update on progress that is incorporated into the dashboard by our Corporate Strategy team and included in an update for Board members.
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C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify Vice Chairman	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Our Vice Chairman is the executive management team member with direct responsibility for leading the company's ESG efforts. Our Vice Chairman reports to the chief executive officer and chairs our Global ESG Committee, which is responsible for identifying, raising and overseeing our response to emerging ESG risks and opportunities, promoting our adoption of ESG best practices and determining key metrics for ESG success. To help ensure our ESG approach is fully-integrated across our eight lines of business, the Committee is comprised of senior leaders from every business line and support group. The Global ESG Committee meets at least four times a year and reports to the Corporate Governance Committee of the Board of Directors. This structure ensures that emerging ESG issues, identified by ourselves, advocates, regulators and other stakeholders – and the risks and opportunities they present – are integrated into our core business decisions and are being reviewed and managed at the highest levels of the company.

In addition to our global governance of ESG, we have established regional committees in Latin America, Asia Pacific and Europe, the Middle East and Africa (EMEA) to guide our ESG strategy and ensure accountability at the regional level.

The Global ESG Committee serves as an integration point for various internal working groups with responsibility for environmental and social issues, including the Global Wealth and Investment Management (GWIM) Impact Investing Council, the Catalytic Finance Initiative (CFI) Steering Committee, and the Capital Deployment Group. These groups are comprised of senior leaders from across the bank and have specific responsibilities within our environmental initiatives. Together, they ensure that we have a robust, comprehensive and integrated platform for governing, executing and monitoring climate change-related strategies.

The GWIM Impact Investing Council was created to expand the ESG products and services we offer wealth management clients – regardless of their asset level – giving them the opportunity to focus investments to address climate change, resource scarcity or environmental issues more broadly, in addition to other important social and governance issues. The Capital Deployment Group leads an enterprise-wide effort to unlock the necessary financing to meaningfully address major global and local societal challenges such as affordable housing, clean water, education, health care, renewable energy, energy efficiency and other critical areas outlined in the United Nations Sustainable Development Goals (SDGs). The CFI Steering Committee comprises several senior executives from across the bank and, in consultation with other CFI partners, has responsibility for overall CFI strategy, supporting and approving specific CFI initiatives and transactions, and recommending any updates to our agreed CFI Principles of Business. As part of our commitment to positive environmental change, we have a dedicated internal team that works full-time on our environmental initiatives.

The Global Environmental Group (GEG), which is part of the Global Marketing and Corporate Affairs group, focuses on five strategic areas: Deployment of Capital, Operations, Employee Programs, Nonprofit Partnerships, and Governance and Policy and operates under the direction of our Global Environmental Executive. The GEG identifies and helps to capitalize on emerging trends that present new business opportunities for the bank, while identifying trends that present risk to the company from both a business and operations perspective and helping us to manage those risks. The group establishes and has accountability for environmental goals for the company – our \$125 billion environmental business commitment, our greenhouse gas and energy use reduction goals, and other operational goals – and develops strategies and implements initiatives to ensure that resources across the company are mobilized to meet these goals. The group is responsible for developing and updating policies in support of both our goals and management of risks, and serve as subject matter experts with internal and external partners. The group manages the company's environmental employee engagement program, My Environment, which grew in 2018 to more than 24,000 participants, and our partnerships with philanthropic organizations.

The GEG, and specifically a dedicated member of this team, is responsible for leading our response to the Task Force for Climate Related Financial Disclosures (TCFD). We have formed an internal working group and are divided into two focused teams, one each for transition risk and physical risk to develop our approach.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

As part of our Responsible Growth strategy we have added Environmental, Social and Governance (ESG) metrics to our Executive Management team's performance dashboard. These metrics include progress towards our \$125 billion environmental business goal, the value of ESG assets under management and our performance in ESG ratings/rankings. These metrics are tracked quarterly and reported to the Board.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

The Global Environmental Group is tasked with catalyzing and supporting the development of low-carbon business activity, the delivery of GHG reduction targets, and coordinating the monitoring and reporting of climate change activities. The team is incentivized (monetarily and through corporate recognition), based on its success in these areas.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Supply chain engagement

Comment

Global Procurement is tasked with engaging with our vendors on the management of climate change, including the delivery of our climate-related supplier engagement targets. The team is incentivized (monetarily and through corporate recognition) based on its success in these areas.

Who is entitled to benefit from these incentives?

Chief Procurement Officer (CPO)

Types of incentives

Monetary reward

Activity incentivized

Supply chain engagement

Comment

The Chief Procurement Officer is responsible for Bank of America's responsible sourcing strategy is incentivized (monetarily and through corporate recognition) based on its success in these areas.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Delivering operational GHG emissions reduction targets: teams, responsible for our internal operations, including but not exclusively the Real Estate Services team and GEG are incentivized to successfully implement activities and initiatives that support energy efficiency and manage and reduce GHG emissions.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Other, please specify

Managing climate change opportunities

Comment

Realization of climate change related revenue opportunities: lines of business that focus directly on climate change and environment-related revenue streams are evaluated based on their management of these opportunities. For example, teams such as Energy Services and Renewable Energy Finance (energy efficiency, solar and wind equipment finance) are paid based on the volume and scale of energy efficiency and renewable energy transactions they complete.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction project

Comment

Incentivizing use of low-carbon vehicles for employees in the U.S., Canada and U.K.: Our low-carbon vehicle program has provided over 10,200 reimbursements since its inception in 2006. Through this initiative, U.S. employees receive a \$4,000 reimbursement for the purchase or \$2,000 for a lease (reimbursement amount differs by country) of a new, eligible, highway-capable electric or hydrogen fuel cell vehicle. In 2018, new participants in the low-carbon vehicle program achieved an estimated cumulative emissions reduction of over 1,600 metric tons of CO₂. We have also installed multiple electric vehicle charging stations at offices across the U.S. and U.K. which are free for employee use.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction project

Comment

Reducing cost of residential solar installation: In 2018, we continued our partnership with SunPower to offer employees a discount on residential solar power contracts. Through the end of 2018, 238 employees have chosen to power their homes with solar energy through the program. By educating employees on the benefits of solar energy and addressing the barriers to installation, the program continued to grow in 2018, garnering positive feedback from all involved.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Efficiency project

Comment

Employee ideas for efficiency projects: as part of our Simplify and Improve program, employees are encouraged to submit ideas on how to make the company more effective and efficient. Employees submitting ideas through the internal online forum "Speak Up!" and other channels and are eligible to receive a monetary incentive if their idea is the first of its kind and selected for implementation. Conserving resources and reducing waste through green initiatives has been a common theme and employees have been rewarded for their suggestions.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Other non-monetary reward

Activity incentivized

Other, please specify

Volunteer service

Comment

Supporting environmental volunteerism: Last year, Bank of America volunteers donated nearly 2 million hours globally, helping address critical needs in the communities where they live and work, including nearly 50,000 volunteer hours devoted to environmental causes. Since 2010 employees have logged over 380,000 volunteer hours on environmental efforts. We support employee volunteerism by offering full-time employees up to two hours of time off each week to volunteer at organizations of their choice. In addition, employees who volunteer regularly with an organization may apply for a volunteer grant from the Bank of America Charitable Foundation for that organization.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Other non-monetary reward

Activity incentivized

Other, please specify

Charitable contributions

Comment

Employee Giving: The Bank of America Charitable Foundation supports employee giving in various ways, including through the Matching Gifts program which offers a way to double – up to \$5,000 per person each calendar year – employees' cash or securities contributions to their favorite charitable organizations. In 2018, the Bank of America Charitable Foundation provided \$31.5 million to support employee giving.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	6	
Long-term	6	10	

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Examples of where we have considered risks and opportunities beyond a 6-year time horizon include our \$125 billion environmental business goal, our onsite solar generation plans, our recent update of our Environmental and Social Risk Policy Framework and our signatory support of the Carbon Principles, a best practice due diligence standard for evaluating financing for companies that are considering new power plant

			construction in the U.S. and for ensuring that the long-term costs of carbon are considered even in the absence of regulation.
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C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Company-level risk:

Our Global ESG Committee meets at least four times a year and has among its responsibilities the identification of ESG risks and opportunities. The Committee includes our Global Banking Chief Risk Officer and Enterprise Credit Risk Executive. The Committee's recommendations are reported to the Corporate Governance Committee of the Board.

We engage key stakeholders to help us understand relevant environmental and social issues and determine which should be included in our published Environmental and Social Risk Policy Framework (ESRPF). Our ESRPF is part of the bank's overall Risk Framework and describes how we identify, evaluate and control environmental and social risks. In developing the ESRPF, we benchmarked our existing policies and positions against industry best practices and reviewed the results of our ESG materiality assessment, working with BSR who conducted interviews with executives and surveyed external stakeholders to determine key issues of interest. The ESRPF is reviewed by the Global ESG Committee every two years or as necessary, and environmental and social issues are discussed regularly at ESG Committee meetings to ensure the ESRPF reflects emerging issues.

Following publication of the TCFD recommendations in June 2017, our CEO signed a statement of support along with CEOs of more than 100 other companies. Our support of the TCFD recommendations demonstrates our commitment to better understand and effectively manage climate-related business risk and connects to our responsible growth strategy. We are developing our approach to the TCFD recommendations and are working in two focused teams to evaluate transition risk and physical risk. Over time as we gain experience and knowledge in both areas, we expect to broaden our approach to other lines of business.

Asset-level risk:

We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities that have a low geo-dispersion rating. The assessment results are reported to business units using the recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review.

Assessments also consider proximity risk, i.e., potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk.

We evaluate the size and scope of identified risks through our Global ESG Committee activities, implementation of our ESRPF and Proximity Risk Assessment processes.

Process for evaluating relative significance of climate risks:

Our ESRPF is aligned to our overall Risk Framework, which outlines our approach to risk management and each employee's responsibilities for managing risk. This alignment helps to ensure that environmental and social risks, including climate-related risks, are an integral part of the bank's assessment and weighing of all risks. As part of our client due diligence and other onboarding processes, front line units and risk teams determine if a proposed transaction or relationship presents potential environmental and/or social risks. Subject matter experts, including GEG members and external consultants, participate in the environmental and social risk management process and help to determine the relative significance of these risks in relation to other risks. If due diligence reveals that a business activity presents significant environmental and/or social risk, that activity may be escalated to the appropriate committee responsible for risk management for further evaluation. These committees are comprised of the business heads and senior executives from our Global ESG, Risk, Compliance and Legal groups, and are responsible for weighing the environmental and social risks against other aspects of the business activity and determining whether to approve, conditionally approve or decline the activity.

Definitions of risk terminologies

Our overall Risk Framework describes seven key risk types that are managed across the business; strategic, credit, market, liquidity, operational, compliance and reputational risks. Climate change is considered a component of several risk types, including credit risk, operational risk, and reputational risk.

Definition of substantive financial impact:

For CDP reporting, we consider risks and opportunities with potential financial implications for our business of over \$10 million per year to be substantive.

C2.2c

(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
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Current regulation	Relevant, always included	<p>This risk type is relevant and included in our risk assessments because we are indirectly exposed to credit and reputational risk related to the direct impacts of regulation, including climate-related legislation that affects our clients. Depending on the sector and geographic location, many of our business clients are already subject to climate change regulation, such as California's AB 32 or the European Trading Scheme. If not effectively anticipated and managed, such regulations could adversely impact our clients' profitability and this in turn could have financial implications for our company by impacting their ability to service debts or make new investments.</p> <p>We assess risks from current regulation through implementation of our Environmental and Social Risk Policy Framework (ESRPF). Regulatory risk is a standard component of our client onboarding and due diligence processes. Recognizing that certain sectors may be more exposed to climate change related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence, involving subject matter experts as needed to evaluate the associated risks, including identification of physical, regulatory and reputational risks.</p> <p>This risk type is also relevant and included because our direct operations are subject to climate-related regulations in some jurisdictions. Currently these regulations, such as the U.K. Carbon Reduction Commitment scheme manifest themselves as increased energy and administrative costs. While not deemed substantive for our organization, we are committed to complying with applicable legislation and have processes in place to monitor regulatory requirements and associated risks. We employ an Environmental Management System that relies on a comprehensive compliance database to help the Global Real Estate Services Environmental Risk team identify, manage and mitigate risk, and improve performance across our corporate real estate portfolio.</p> <p>Finally, this risk type is relevant to our tax equity investments in utility scale wind and solar projects, which are enabled by federal renewable energy tax credits. As the tax credits are set to expire, we are shifting our business to focus on other types of financing products for renewable energy.</p>
Emerging regulation	Relevant, always included	<p>This risk type is relevant and included in our risk assessments because we are indirectly exposed to credit and reputational risk related to the direct impacts of regulation, including climate-related legislation on our clients. As countries and other jurisdictions move to introduce new regulations designed to promote a transition to a low-carbon economy, these new regulations could have a negative impact on our clients, and in turn on our business, if clients do not</p>

		<p>effectively anticipate and plan for them. Clients in the power sector, for example, are potentially exposed to emerging regulations that put a price on GHG emissions. It is important that the future costs of complying with such regulation are factored into decisions about new long-term investments in this sector.</p> <p>We assess risks from emerging regulation through implementation of our ESRPF. Regulatory risk is a standard component of our client onboarding and due diligence processes. Recognizing that certain sectors may be more exposed to climate change related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence, involving subject matter experts as needed to evaluate the associated risks, including identification of physical, regulatory and reputational risks.</p> <p>This risk type is also relevant and included because our direct operations are subject to climate-related regulations in some jurisdictions. Currently these regulations manifest themselves as increased energy and administrative costs. While they are not deemed substantive for our organization, as jurisdictions increase their use of regulatory frameworks to promote emissions reductions, we may see these costs increase in the future. We are committed to complying with applicable legislation and have processes in place to monitor regulatory requirements including emerging requirements. We employ an Environmental Management System that relies on a comprehensive compliance database to help the Global Real Estate Services Environmental Risk team identify, manage and mitigate risk, and improve performance across our corporate real estate portfolio.</p>
Technology	Relevant, always included	<p>This risk type is relevant and included where we provide financing for companies that are bringing new low-carbon technologies to market. We are exposed to client risk should such companies and their technologies fail to be successful.</p> <p>These risks are evaluated as part of our credit risk management and due diligence process. We manage credit risk to a borrower or counterparty based on their risk profile, which includes assessing repayment sources, underlying collateral (if any), and the expected impacts of the current and forward-looking economic environment on the borrowers or counterparties.</p>
Legal	Relevant, always included	<p>This risk type is relevant in the form of exposure to lawsuits related to our climate-related performance and/or disclosures. We consider this risk to be closely linked to reputational risk. As we document in our enterprise Risk Framework, 'reputational risk may arise from negative perception on the part of key stakeholders (e.g., clients, counterparties, investors, regulators, rating agencies), scrutiny from external parties (e.g., politicians, consumer groups, media</p>

		<p>organizations) and the ongoing threat of litigation.'</p> <p>One way in which we evaluate and address legal risks therefore is through our reputational risk processes, including through implementation of our ESRPF. For example, recognizing that certain client sectors may be more exposed to climate change related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence, involving subject matter experts and Reputational Risk Committees as needed to evaluate and escalate the associated risks.</p>
Market	Relevant, always included	<p>This risk type is relevant and included because market conditions could impact demand for our low-carbon financing products and services and this in turn could adversely affect our ability to realize our significant environmental business commitment. We also face competition in the market from other financial institutions investing in low-carbon financing products and services.</p> <p>There are several components to our risk assessment process for market risk. Our Global Environmental Group (GEG) is responsible for leading our environmental business goals, working with teams across our lines of business to accelerate market opportunities and address risks associated with our low-carbon financing products and services. Multiple teams across the organization have established leading positions in low-carbon financing, including green bond underwriting, impact investments, tax equity investments and financing for renewable energy projects. These teams ensure that we are always innovating and creating new products to adapt to changing market dynamics.</p>
Reputation	Relevant, always included	<p>In our Risk Framework, we recognize seven key risk types of relevance to our business (strategic, credit, market, liquidity, operational, compliance and reputational). Environmental and social issues often present reputational risk, and reputational risk is a key part of our risk assessment process.</p> <p>We are subject to reputational risk directly, for example if we are not considered to be making meaningful public commitments on how we are addressing climate-related issues or if we do not make substantial progress towards meeting our commitments. We are subject to reputational risk indirectly through our lending and other financial services if we are not perceived to be adequately evaluating and mitigating environmental and social risks associated with client transactions.</p> <p>We assess reputational risk through implementation of our ESRPF. Recognizing that certain sectors may be more</p>

		exposed to climate-related risks than others, for business activities in these sectors we engage in enhanced client and transactional review and due diligence, involving subject matter experts and Reputational Risk Committees as needed to evaluate and escalate the associated risks.
Acute physical	Relevant, always included	<p>This risk type is relevant and included because we have operations in regions that are vulnerable to an increase in the severity, duration and/or frequency of tropical storms. We also have operations in regions which are experiencing an increase in extreme heat events and prolonged dry periods increasing the frequency and severity of wildfires and drought. Our client's operations in such regions could also be adversely impacted which in turn could expose us to credit risk.</p> <p>We conduct an annual assessment of physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities for our major locations. The assessment results are reported to business units using the major recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review.</p>
Chronic physical	Relevant, always included	<p>This risk type is relevant and included because physical changes arising from sustained temperature increases, such as sea level rise and its coastal erosion, storm surges and flooding effects could directly impact our own operations, for example, where we have facilities in low-lying, coastal regions. Our client's operations in such regions could also be adversely impacted which in turn could expose us to credit risk.</p> <p>Annual assessments by our business continuity team consider physical risks to our facilities from factors including severe weather, wildfires and flooding. Our Business Continuity group assesses risks associated with planned recovery facilities for our major locations. The assessment results are reported to business units using the major recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review.</p>
Upstream	Relevant, sometimes included	<p>This risk type is relevant and included in our risk assessments because we are indirectly exposed to the impacts of physical and transitional climate risks on our suppliers. For example, if key supplier operations are disrupted due to increased severity and frequency of severe weather events this could lead to increased costs and/or a lack of availability of products and services we need to run our business.</p> <p>We have completed an assessment to identify supplier categories at highest risk from flooding and we have developed detailed business continuity plans for suppliers in high risk categories.</p>

Downstream	Relevant, always included	<p>This risk type is relevant and included because we face credit risk if our clients are unable to repay loans because of climate-related impacts. Our clients' businesses could be adversely impacted, for example, if they do not effectively anticipate and manage new climate-related regulatory requirements (transition risk) or by physical climate changes (physical risk). Near term transition and physical risks are woven into our regular risk management processes and our business units have assigned risk managers to focus on issues that have specific relevance to sectors or geographies (including those related to climate change).</p> <p>For example, increased flood incidence and severity could lead to customers defaulting on their mortgage payments if, for example, flood insurance premiums become unaffordable. In addition, customers outside flood zones, who may not have flood insurance, are now being impacted by climate-related flooding, which could lead those customers to default on their mortgage payments.</p> <p>From the potential impact of water stress on agricultural clients to tidal surge impacts on coastal commercial real estate, each of our lines of business accounts for climate-related risks in vetting transactions and client relationships.</p>
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C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Processes for managing risks and opportunities

Material ESG risks and opportunities are those that have an impact on our stakeholders' decisions to work with us, whether as a client, investor, vendor or community partner. One of the processes we use to prioritize risks and opportunities is to collect feedback from internal and external sources, including via our National Community Advisory Council (NCAC). The NCAC is a stakeholder group that provides us with important perspectives on consumer policy, social justice, community development and environmental challenges facing Bank of America and the clients and communities we serve. The outcomes of the ESG materiality assessment completed in 2016 were reviewed, prioritized and agreed upon by our Global ESG Committee. ESG Investing and Low-carbon Financing are among the five issues identified as most relevant to ongoing growth and success. We have a \$125 billion environmental business initiative to drive the transition to a low-carbon economy. The lines of business have made significant commitments and are held accountable for achieving this public goal. The CEO and his direct reports are responsible for this metric as part of their annual performance dashboard.

As an example of a process that we use to manage risk, our ESRPF outlines the environmental and social topics we recognize to be of heightened importance to our company and our stakeholders, and our approach to them. Our ESRPF sets out our overall position on climate change and our approach to managing the related risks and opportunities. Recognizing that certain sectors are of heightened sensitivity, including arctic drilling, coal fired power plants and coal extraction, palm oil and forestry, we outline certain minimum client requirements in our ESRPF and we undertake enhanced due diligence for business activities in these sectors to evaluate the associated risks, including physical, regulatory and reputational risks. A client relationship or transaction may require enhanced due diligence related to environmental and social issues due to our policy or standard, because it is referred by a risk manager after standard due diligence, or if the client, business activity, industry or geography is deemed sufficiently sensitive. These instances require enhanced due diligence which is supported by the Global Environmental Group and, where needed, external experts. If due diligence reveals that a business activity presents significant environmental and social risk, that activity may be escalated to the appropriate committee responsible for risk management for further evaluation. These committees are comprised of the business heads and senior executives from our Global Risk, Global Compliance and Legal groups, and can approve, conditionally approve, or decline a business activity. As applicable, the ESG Committee is engaged to provide additional direction.

Below are examples of how these processes have been applied to specific risks and opportunities:

Transitional Opportunity example: In 2018, we were invited to provide capital markets services to a company that develops non-transgenic crops for large scale agriculture. While the company develops products that are considered non-genetically modified organisms (GMOs) in most countries, use of bio-engineering is considered controversial by some. We conducted enhanced due diligence on the firm, evaluating its process and policies, and transparency. We further considered the company's positioning on global climate change and using its products to help address related challenges. Balancing these elements, we decided to move forward with the opportunity.

Physical Risk example: Within our operations, at the facility level, our Proximity Risk assessments consider potential shared risk between production and recovery facilities based on probable risks for a given geography and the specific locations of the production and recovery sites. For example, a production and recovery facility located a short distance apart from each other on the Florida south coast may have a shared hurricane risk. Assessments prioritize risk based on scores derived through the analysis of the severity and likelihood of occurrence for each risk category. The assessment results are reported to business units using the recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Mandates on and regulation of existing products and services

Type of financial impact

Other, please specify

Increased risk profile for financing

Company- specific description

We have made significant progress towards financing the transition to a low-carbon, sustainable economy through lending, investing, capital raising, advisory services and developing financing solutions for our clients. Policies and regulations that place a price on carbon, require emission reductions or incentivize clean energy and/or energy efficiency are important for creating a framework that supports our investments in

low-carbon technologies and energy efficiency. Certain regulatory developments and regulatory uncertainty could negatively impact our business due to increased risks, reduced revenues and present less opportunity to finance low-carbon business.

We are directing capital towards renewable energy through products and services offered across multiple lines of business. As part of our U.S. renewable energy capital deployment we make significant tax equity investments in utility scale wind and solar projects. We were the top tax equity investor in the U.S. from 2015 through 2018 according to the BloombergNEF league tables. These investments are enabled by the investment tax credit and production tax credit which are federal incentives for solar and wind power respectively. These incentives are set to expire in 2023 following a multi-year phase down. As the tax credits expire, we are preparing for this change by shifting our business to other types of financing products (with different risk/return characteristics) to continue to meet the capital needs of renewable projects.

We play a critical role in the residential solar industry by helping solar companies raise capital to scale up their business in deploying residential solar systems across the U.S. Through our Global Investment Banking, Global Markets and Global Leasing businesses, we are a leading financier (advisory, debt and tax equity) for residential solar companies. Net metering allows customers who generate their own electricity to feed electricity back into the grid. Net metering rules face opposition in some U.S. states. In 2017 and 2018, several states including Michigan, Connecticut and Indiana moved to eliminate net metering or to establish less-generous net metering rates. Such policy changes have been shown to curtail new rooftop solar installations. The above are examples of regulatory conditions that can have a negative impact on our renewable energy business.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Given our commitment to developing a leading low-carbon banking business, legislative developments that create uncertainty about, or undermine the market for renewables and other low-carbon investments present a potential loss for us and serve to increase the risk profile for certain low-carbon transactions. While it is difficult to accurately quantify the financial implications, we estimate the potential delayed or unrealized revenue resulting from such legislative developments to be more than \$10 million annually, our threshold for 'substantive' for CDP reporting. This estimate is based on professional judgment by our subject matter experts within the business.

Management method

We advocate for stable, predictable regulation and partner with others to raise understanding of policy conditions needed to support the transition to a low-carbon economy. The following are specific examples of our advocacy. We participate in the U.S. Partnership for Renewable Energy Finance (PREF), a coalition of senior level financiers who invest in all sectors of the energy industry, led by American Council on Renewable Energy (ACORE). Our aim is to provide expert input to policy makers on renewable energy finance markets with a focus on impacting renewable energy policies that support continued expansion of the renewables market in an efficient and effective way. Our Global Head of Power and Renewables in our Investment Banking group is on the board of ACORE and participates in PREF speaking events and other meetings with members of the legislative and executive branches of the U.S. government. We also participate in the American Wind Energy Association and the Solar Energy Industry Association.

In addition, we are developing new products and diversifying our low-carbon business both geographically and in terms of services to mitigate the impact of regulatory developments that could have negative implications for our low-carbon financing activities.

We calculated the cost of management based on trade association membership and sponsorship fees, which are tracked by our Finance team.

Cost of management

200,000

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Customer

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Other

Type of financial impact

Increased credit risk (e.g., increased probability of default and/or loss given default)

Company- specific description

We have indirect exposure to legislation through clients. We have relationships with most of the U.S. Fortune 100 companies and the Fortune Global 500, as we are among the world's largest global commercial, corporate, investment banking and markets franchises. We are indirectly exposed to credit risk because of the direct impacts of legislation on our clients. Depending on the sector and geographic location, many of our business clients are already subject to climate change regulation, such as the European Trading Scheme. Others face new regulatory requirements such as the emissions trading regime in China. The proliferation of sub-national and national regulatory regimes introduces significant complexity and costs for companies operating in multiple regions including the U.S. If not effectively anticipated and managed, such new regulations could adversely impact our clients' profitability and this in turn could have financial implications for our company by impacting their ability to service debts or make new investments.

The palm oil industry provides a specific example of potential client exposure for our company. Included among the environmental and social concerns surrounding palm oil production are GHG impacts relating to the cultivation of palm oil on peatland, land-use change in existing and new plantations, and processing and production facilities. Concerns surrounding the environmental and social impacts of this industry are driving discussions among policy makers about the potential role of regulation in mitigating these impacts. For example, in April 2017 the EU Parliament voted to support a resolution calling for mandatory standards including minimum sustainability criteria for imports of palm oil and products containing palm oil to the EU, the second largest market for palm oil imports. Additionally, in 2018, the EU Parliament voted in favor of excluding biofuels produced from palm oil from being counted towards the EU Renewable Energy targets and phasing out the use of palm oil in transport fuels from 2030.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Our clients' profitability could be affected if they do not prepare for new legislation, if they face a proliferation of regional legislation or if legislation is poorly designed. This in turn could impact their ability to service debts or make new investments, with potential negative financial implications for our business of greater than \$10 million annually. This estimate is based on professional judgment by our subject matter experts within the business.

Management method

Through our ESRPF we evaluate and mitigate environmental and regulatory risks associated with client transactions. Sectors with heightened risk levels are subject to enhanced due diligence. As an example, transactions where the majority use of proceeds supports palm oil production are subject to enhanced due diligence. This consists of a formal review by a subject matter expert on risks attributed to palm oil. The reviewer discusses environmental and social risks with the client, reviews client disclosures, completes a media search and has the client complete a Palm Oil Client Questionnaire. Clients whose business is focused on ownership and management of palm oil plantations and operations are required to have their operations certified to the Roundtable on Sustainable Palm Oil standards or equivalent, or have in place an outlined action plan and schedule for certification. Incorporation of these requirements in our ESRPF helps to mitigate risks associated with potential client exposure to current and future regulatory requirements in this sector.

By supporting the effective integration of environmental risks and operational activities across our business and by assisting the development and implementation of our ESRPF, our Global Environmental Group (GEG) is central to our management of this risk. We calculated the cost of management based on the GEG's total annual operating cost.

Cost of management

12,000,000

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Other, please specify

Business disruption, employee health

Company- specific description

With offices in Hong Kong, Japan, the Philippines, Taiwan, China and Australia, our Asian and Australian operations are vulnerable to an increase in the severity, duration and/or frequency of tropical storms experienced in these regions. Our operations in the southern and eastern United States, including our headquarters in Charlotte, North Carolina, are also vulnerable to an increase in the severity, duration and frequency of seasonal storms and potential for severe weather conditions. We operate 4,000+ U.S. retail financial centers, some of which are vulnerable to the physical impacts of climate risk with the potential to disrupt the accessibility of our retail outlets to our clients. Physical risks in the U.S. take the form of increased frequency and severity of storms with related flooding, particularly affecting the coastal southern and eastern states, and extreme heat events resulting in drought conditions and numerous wildfires across the West, Central and Southeast regions. This could lead to temporary or, in the event of severe damage, permanent closure of one of our financial centers. Physical climate risks in the U.S. are compounded by aging infrastructure, critical infrastructure dependencies, expanding urban areas in tornado zones, coastal population expansion, rising temperatures, precipitation and sea level rise and a lack of associated forward investment as highlighted in a November 2018 report by National Climate Assessment. Our U.S. operations experienced 61 Natural Disaster events related to hurricanes, tropical storms, flooding, wildfires, heavy snow and earthquakes in 2018. Our Asia Pacific and Latin America operations are also vulnerable to climate change impacts. There were 13 Natural Disaster events (tropical storms, typhoons and flooding) in these geographies in 2018. Climate change may contribute to less predictability around the types, timing and location of severe weather events, and we account for this in our business continuity planning.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

33,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Implications include retail outlet and/or office closures, facility repair costs, lost work time, increased utility costs, lost revenue, and increased insurance premiums. To illustrate the financial implications of specific events, the total operational losses from the direct impacts on our facilities were approximately \$33 million from Superstorm Sandy and approximately \$2 million from hurricanes and wildfires occurring in the U.S. in 2018. These costs are based on natural disaster tracking records from our real estate and business continuity teams. We track work order costs of repairs after severe weather events and as the dataset develops over time, we will use it to understand trends associated with climate risk.

Management method

Our Building Disaster Recovery Planning (BDRP) team prepares our facilities for natural disasters. During 2018, the team managed response and recovery for 128 global events, 74 of which were natural disasters. In partnership with vendors, the team delivers preparedness and response training for natural disasters, including hurricanes. Through the provision of laptop, tablets and fobs, many employees can work remotely and are able to support operations should an impact occur. In such an event, clients are encouraged to use online banking, mobile telephone banking, and contact centers. We have a large, distributed ATM network and reciprocal agreements for our clients to use ATMs operated by other banks. We have a fleet of mobile financial centers and mobile ATMs strategically located within the U.S. for immediate

deployment to areas impacted by natural disasters. In 2018, our U.S. Regional Support team prepared for significant natural disasters—multiple hurricanes, winter storms, wildfires and flooding, driving broader awareness of the threats and enabling central coordination of continuity plans for business lines. Our systems, platforms, and applications all performed without interruption, despite record-setting hurricane force winds, driving rains, substantial flooding, and widespread power outages.

We calculated the cost of management by estimating the additional costs of business continuity planning and recovery due to climate induced changes.

Cost of management

1,000,000

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Customer

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Increased credit risk (e.g., increased probability of default and/or loss given default)

Company- specific description

We are exposed to the impacts our clients face from physical climate changes. Our clients' assets and businesses could be affected by physical climate impacts such as increasing operational, capital maintenance and insurance costs, reduced staff health, safety and productivity and increased asset depreciation rates. If the profitability or viability of a client or a group of clients is adversely affected, this could have a negative economic effect on our business of providing financing services to these clients.

This risk applies to our corporate clients and our mortgage clients. For our corporate clients, climate change risk can have an impact at the level of individual assets or entire sectors. Industries at greatest long-term risk include agriculture, insurance, and travel and tourism all of which are vulnerable to the physical effects of climate change. For our mortgage clients, flooding is an area of potential exposure for our company. There is scientific consensus that flood risks are increasing in many regions due to climate change. According to a 2013 FEMA study, rising seas and increasingly severe weather are expected to increase the areas of the U.S. at risk of floods by up to 45% by 2100. Increased flood incidence and severity could lead to our clients defaulting on their mortgage payments if, for example, flood insurance premiums become unaffordable. Clients may also find themselves in a negative equity situation due to housing values being impacted when insurance costs rise due to expanding flood hazard zones and increased flood incidence and severity. Of our current portfolio of U.S. real estate secured loans, 4% are in a FEMA designated special flood hazard area.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Physical climate change could impose a financial cost on our clients, for example through direct damage to their facilities, increased insurance premiums, and lost revenue due to facility closures, lost work time and production or distribution delays. This in turn could impact their ability to service debts or make new investments, with potential negative financial implications for our business of greater than \$10 million annually. This estimate is based on professional judgment by our subject matter experts within the business.

Management method

In 2018, as part of our TCFD work, we partnered with a global climate risk firm to assess the exposure of selected business portfolios to physical climate risks including hurricanes, floods, droughts, tornadoes and wildfires. Phase 1 of the project aims to provide a diagnostic to identify exposed regions and main hazards, through detailed geographic analysis on a consumer mortgage portfolio. The Willis Towers Watson Global Peril Diagnostic model was used to produce visualizations of the portfolio's exposure to eight natural hazard types and quantification of potential financial vulnerability in terms of value at risk. This analysis is ongoing and additional outputs will include interactive visualizations to inform a view of which assets are most susceptible to climate risk and which hazards are of most concern. A second phase of work will build on the findings from Phase 1 to produce a more detailed quantitative analysis for those areas with the largest value exposed to physical climate risks.

By supporting the effective integration of environmental risk management activities across our business and by coordinating our TCFD work, our Global Environmental Group (GEG) is central to our management of this risk. We calculated the cost of management based on the GEG's total annual operating cost.

Cost of management

12,000,000

Comment

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Reputation: Increased stakeholder concern or negative stakeholder feedback

Type of financial impact

Reduced revenue from decreased demand for goods/services

Company- specific description

As one of the world's largest financial institutions, protecting our brand among our stakeholders, including clients, employees, shareholders, regulators and NGOs is of vital importance. The financial services sector can and should support the transition to a low-carbon economy – it is a societal imperative, but also a business imperative, as we address risk and capitalize on the opportunities presented by this transition.

We are subject to reputational risk directly, for example if we are not considered to be making meaningful public commitments on climate change or if we do not make substantial progress towards meeting our commitments. Having made significant public commitments, including our \$125 billion environmental business initiative and our 2020 operational goals, the credibility and associated business value of these initiatives to our company could be undermined by perceptions that seem to counter our commitments. Our shareholders are increasingly interested in our sustainability commitments and progress, as investor understanding of the relationship between sustainability and business performance grows. If we are perceived to be falling behind on our environmental commitments, this could affect our standing in indices that highlight sustainability credentials and could potentially lead to clients switching their business to other financial institutions. We receive a significant number of requests for proposals for banking services that include queries on our policies and practices, and how they align with those of our clients.

We are subject to reputational risk indirectly through our lending and other financial services if we are not perceived to be adequately evaluating

and mitigating environmental and social risks associated with client transactions. As we state in our Environmental and Social Risk Policy Framework (ESRPF), environmental and social issues can cross many risk types, and we recognize that certain sectors and topics, such as palm oil, forestry, arctic drilling and coal are of heightened sensitivity and importance to us and our stakeholders. Through our ESRPF, we have developed clear position statements on how we evaluate and mitigate the social and environmental risks associated with client transactions in these sectors.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

There are possible financial implications to our company if we are unable to fulfill our commitments to direct capital to low-carbon technologies/activities and reduce our operational environmental impacts; effectively integrate climate change considerations into our lending and investment activity; or do not provide transparency into our areas of action. These implications could include loss of client relationships/business, failure to secure new business and/or reduced shareholder value. With regards to new business specifically, the typical

revenue value of RFPs we receive each year that incorporate environmental, social and governance requirements is above \$10 million. We consider this value to be one measure of the financial implications to our business of maintaining and enhancing our strong ESG practices.

Management method

We act in many ways to ensure that we set, achieve, and communicate impactful climate change commitments. Metrics linked to our \$125 billion environmental business initiative are included in performance dashboards for our Executive Management team. Our lines of business have specific and measurable climate-related goals and metrics. We ensure senior oversight of our programs through our Global ESG Committee and supporting governance structure. We communicate our efforts to our stakeholders by reporting externally on our commitments and progress through CDP and in our ESG Summary and Annual Report.

In line with our ESRPF, if due diligence reveals that a business activity presents significant environmental or social risk, that activity may be escalated to the appropriate Reputational Risk committee which can approve, conditionally approve, or decline a business activity. We track and externally report on ESRPF related items discussed by these committees. 18 items were referred to a risk committee in 2018 due to environmental considerations.

By supporting the effective integration of environmental risk management across our business, spearheading our My Environment employee engagement program and working with many different external stakeholders our Global Environmental Group (GEG) helps to protect our environmental reputation both internally and externally. We calculated the cost of management based on the GEG's total annual operating cost.

Cost of management

12,000,000

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

The agreement made at the U.N. Conference on Climate Change (COP21) in Paris provides a framework to drive international action on climate change and is generating significant opportunities to increase our business. The Agreement provides for international mechanisms to promote climate friendly finance, carbon trading, technology transfer and adaptation to climate change impacts. It is giving momentum to national emission reduction plans and targets, and the related actions of international, sub-national and private sector organizations. Many governments around the globe have made commitments (Nationally Determined Contributions) to support and implement the Paris Agreement. Despite the U.S. government having announced their withdrawal from the Paris Agreement, many sub-national and corporate entities in the U.S. have committed to working to meet the spirit of the original U.S. commitment. These commitments have generated many opportunities; for example, our Catalytic Finance Initiative is leveraging increased investment needs in developed and emerging markets and for specific technologies.

These opportunities will be driven by ramping up investment in mitigation measures such as renewable energy technologies, smart grids and energy storage. A 2018 study by the International Institute for Applied Systems Analysis shows that low-carbon investments will need to markedly increase if the world is to achieve the Paris Agreement aim of keeping global warming well below 2°C. To meet countries' NDCs, the study found that an additional \$130 billion of investment will be needed by 2030, while to achieve the 2°C target the gap is \$320 billion and for 1.5°C it is \$480 billion.

Achieving the goals of COP21 will mean transforming the global economy, and the kind of lending and investing that will be needed for this transformation requires financial services firms, such as ours, with the scale, expertise and influence to make a real difference and capitalize on new markets. Our \$125 billion environmental business commitment, along with the other financial commitments made by our peers, is helping to mobilize the capital needed for this transition to a low-carbon economy through sustainable and environmental business activities.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

By generating opportunities for our climate finance business, we anticipate that implementation of the Paris Agreement will result in well over \$10 million of additional business annually for us. This will manifest from our \$125 billion environmental business initiative and specific programs and initiatives including our Blended Finance Catalyst Pool and our Catalytic Finance Initiative (CFI). This estimate is based on professional judgment by our subject matter experts within the business.

Strategy to realize opportunity

In response to the opportunity created by the NDCs developed in conjunction with the Paris Agreement, we have developed and expanded innovative financing structures and new partnerships. The CFI is one example of action we are taking to tackle these challenges. We originally launched our CFI in 2014 with a \$1 billion commitment and a goal to stimulate substantial new investment into high-impact clean energy projects through additional partnerships. The CFI has since been expanded to include 11 other leading financial organizations, completing 30 deals in developed and emerging markets and helping to mobilize more than \$11 billion in investments.

During 2018, our CFI activities included a \$250,000 grant to support the GivePower Foundation's goal of bringing safe water to communities in Kenya, Colombia and Haiti through the installation of solar-powered desalination systems. Our efforts to establish and expand the CFI were recognized with a 2018 UN Momentum for Change Award, which acknowledges examples of innovative, scalable and high impact climate actions.

By closely monitoring developments associated with the Paris Agreement and the NDCs, working with our lines of business on our \$125 billion environmental business commitment and leading our CFI, our Global Environmental Group (GEG) is spearheading our efforts to realize related opportunities for increasing our climate finance business. We calculated the cost to realize based on the GEG's total annual operating cost.

Cost to realize opportunity

12,000,000

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Increased revenue through demand for lower emissions products and services

Company-specific description

Renewables have a major role to play in curbing global emissions and renewable capacity additions need to grow by over 300 GW on average each year between 2018 and 2030 to reach the Paris Agreement goals, according to the IEA's Sustainable Development Scenario. Policies that place a price on carbon, require emission reductions and incentivize clean energy and energy efficiency are an important driver for enabling the growth needed to deliver the Paris Agreement goals, and they create a framework that supports our investments in low-carbon technologies and energy efficiency.

Our renewable energy financing business lines benefit from tax incentives such as the U.S. federal investment tax credit and production tax credit and policies such as renewables portfolio standards, interconnection standards and net metering rules. With these regulatory drivers and market dynamics, including falling technology costs and increased demand for renewables, our deployment of capital towards renewables projects has grown substantially. For example, our Renewable Energy Finance team, which provides tax equity investments that are enabled by the U.S. federal tax credits has been responsible for approximately \$10.5 billion of new renewable energy tax equity financing supporting wind and solar facilities since 2007. In addition to tax equity, we provide a full range of services to support the renewable energy sector – including lending, capital markets and advisory services. Additionally, according to Dealogic's league tables, we were the top advisor globally to renewables mergers and acquisitions deals between 2013 and the end of the first quarter of 2019.

The 2015 Special Report on Energy and Climate Change, part of the World Energy Outlook published by the IEA ahead of the 2016 COP21 argues that energy efficiency is key to the transformation of energy systems and will play an critical role in cutting the growth of world energy demand to one-third of the current rate by 2040. The report also points to the role of the public sector in developing policies that facilitate and

incentivize investments in energy efficiency. Our Global Leasing Energy Services team, which provides financing for large scale energy efficiency capital projects benefits from the improved returns on investment that result from government action directed towards incentivizing energy efficiency.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We estimate the possibility of approximately \$10 billion in additional business towards our environmental business initiative over the next three years from this opportunity. This is based on past performance and on projections. We expect regulatory incentives to influence the viability of renewable energy projects and large-scale capital energy efficiency projects.

Strategy to realize opportunity

We track and incorporate regulatory incentives into our clean energy strategic planning and transactional work. We tailor development of this business in response to evolving regulation. As an example of how we actively manage this opportunity, in 2018 we provided \$147 million in

construction financing and \$155 million in tax equity financing for the Live Oak Wind Project, a 200-megawatt facility located in Schleicher County, near San Angelo, Texas. We also provided the initial power hedge and developed an offtake agreement for 50% of the hedged power to serve commercial and industrial customers.

We led the structuring and placement of membership interests in separate wind asset portfolios for a major corporate client. For these transactions, we provided tax equity investments, placed the cash equity interests, and provided debt financing to the cash equity buyers. For our innovative work with respect to these transactions, we received two nominations for 2018 Financial Deal of the Year at the Platts Global Energy Awards. The transactions exemplify our sector expertise and the power of teamwork and collaboration across our teams to realize our institutional commitment to renewables.

We calculated the cost to realize based on the total annual operating cost of our REF and Energy Services groups which provide financing to renewable energy projects and capital energy efficiency projects.

Cost to realize opportunity

32,000,000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation and insurance risk solutions

Type of financial impact

Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description

We believe that bond issuances are one of the best tools for companies, municipalities and other entities to finance the \$140 to \$300 billion of investment annually that UNEP's 2016 Climate Change Adaptation Finance Gap Report estimates will be needed by 2030 for global climate change adaptation. This creates opportunity for us to provide additional products and services. Green bonds are fixed income, liquid financial instruments for raising debt capital for climate mitigation and adaptation initiatives and were created to increase funding of such initiatives by accessing the \$100 trillion bond market and expanding the investor base for climate projects. We have been a leader in developing the green bond market since it began a decade ago. We worked with peers to develop the Green Bond Principles to ensure the credibility of the market, we were the first corporation to issue a benchmark sized green bond, and we have led the market in underwriting. Since 2007, we have underwritten \$38 billion in green bonds on behalf of over 100 clients, supporting more than 220 deals and providing critical funding to environmental projects. In 2018 alone, we underwrote \$9.8 billion (pro-rata basis) in corporate green bonds on behalf of 40 unique clients. In the municipal market, we led the first green bond underwriting for the Commonwealth of Massachusetts in 2013 and since then have ranked as the number one municipal green bond underwriter, having underwritten \$7.1 billion consisting of 49 transactions (representing a 21.1% market share). In 2018, we underwrote \$700 million in municipal green bonds on behalf of 10 unique clients. While many green bonds issued to date have focused on mitigation, there is significant potential, especially in areas such as municipal green bonds, for funds to be raised for adaptation projects, which creates opportunities for our green bonds business. The need to mobilize additional adaptation finance is particularly pressing in developing countries where adaptation capacity is often the lowest while needs are high. Through partnerships such as the Global Innovation Lab, we are participating in piloting new forms of innovative climate finance solutions which will be needed to broaden investment opportunities both generally, and for our company specifically, in climate mitigation and adaptation in these important economic growth regions.

Time horizon

Medium-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

9,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Green bond issuances are an area of significant growth opportunity for the bank. We anticipate more than \$9 billion of annual business activity in the green bonds space for our company. This estimate is based on our monitoring of the evolving market and our performance to date.

Strategy to realize opportunity

Our ESG Capital Markets team is leading our strategy to realize this opportunity by actively educating our relationship bankers across corporate and investment banking and public finance to offer this financing tool to clients.

Our 2018 green bond underwriting work included coordination of the inaugural issuances from several U.S. corporations, including DTE Energy, Duke Energy, Public Service Company of Colorado, Alexandria Real Estate Equities, Boston Properties and Equity Residential. We also led offerings for global clients including Swire Properties, Engie, Iberdrola, National Australia Bank, Handelsbanken, and New South Wales Treasury Corporation. These deals provided critical funding for a variety of environmental projects, including projects in the categories of renewable energy, green buildings, climate adaptation, and energy efficiency.

Our 2018 municipal green bonds work included transactions for water infrastructure and related investments by the California Infrastructure Economic Development Bank, Massachusetts Water Resources Authority and the Indiana Finance Authority; energy efficiency projects for New York City and New York State housing; and a general-purpose issuance for the City of Honolulu that included funds for climate adaptation.

We calculated the cost to realize by estimating the additional annual staff and other costs in support of our green bond and other climate adaption financing activities.

Cost to realize opportunity

100,000

Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

As one of the world's largest financial institutions, we are experiencing increasing interest from our stakeholders including employees, investors, clients, NGOs and policymakers in our environmental performance and initiatives. To the extent that we can positively differentiate ourselves, for example through operational goals and initiatives, innovative financing solutions and partnerships, and environmental risk policies, we have an opportunity to enhance our brand, attract new employees, investors and clients and increase employee retention rates.

As our clients and other stakeholders seek to address environmental challenges and opportunities in key growth markets, they are looking to work with and learn from financial services partners with a reputation for building a demonstrable track record and body of expertise on these

topics. For example, we are the leading underwriter of green bonds globally since 2007 (according to BloombergNEF and the Environmental Finance Bond database) and this has positioned us well to participate in the rapidly growing green bonds market in Asia-Pacific. External recognition for our environmental performance and low carbon financing work enhances our overall reputation for leadership in this area. In 2018 we were recognized by Euromoney as World's Best Bank, North America's Best Bank for Sustainable Finance, Latin America and Asia's Best Bank for Corporate Social Responsibility. We were also awarded a 2018 UN Momentum for Change Award, which acknowledges examples of innovative, scalable and high impact climate actions. Our environmental commitments are of interest to, and a source of pride for, many of our employees. Our My Environment program drives positive change by helping employees act as better environmental stewards at work, at home and in the community and in 2018 it grew to over 24,000 members. During the 2018 Climate Week in New York, we announced that we were signing on to the Climate Group's EV100 initiative, joining other companies committed to accelerating the transition to electric vehicles. Having already installed over 100 workplace charging stations in the U.S. and U.K. and having provided reimbursements to over 10,000 employees participating in our low-carbon vehicle reimbursement program, as an EV100 member, we are committed to additional workplace charging infrastructure for electric vehicles.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Reputational opportunities have possible financial implications for our company through the potential to attract new clients, recruit talent, drive additional revenue, improve shareholder value, and reduce costs associated with employee turnover. While it is very difficult to comprehensively quantify the positive financial implications, we estimate the potential for over \$10 million of additional revenue per year to result from a reputation for leadership in the environmental financing field. This estimate is based on professional judgment by our subject matter experts within the business.

Strategy to realize opportunity

We build our reputation by participating in external programs that recognize environmental leadership. In support of our goal to purchase 100% renewable electricity by 2020, we have been members of the U.S. EPA Green Power Partnership since 2017. In 2018 we provided financial support for a first of its kind solar-wind hybrid power generation project by making a long-term commitment to purchase the project's renewable energy certificates, covering our electricity usage in Minnesota. We are recognized by EPA as a top 10 green power purchaser and we were named as a top performer in the 2018 International Renewable Energy Agency report "Corporate Sourcing of Renewables: Market and Industry Trends".

We also build our reputation through partnerships aimed at developing innovative and impactful climate solutions. We recently won an Innovative Partnerships Climate Leadership Award for our Community ReLeaf partnership with American Forests to bring more trees to urban areas, thereby improving the environment, revitalizing neighborhoods and creating jobs.

By supporting the integration of environmental risks and opportunities to our business, spearheading our My Environment program, working with external stakeholders, and leading our participation in events, rating surveys and recognition programs our Global Environmental Group helps to build our environmental reputation both internally and externally. We calculated the cost to realize based on the GEG's total annual operating cost.

Cost to realize opportunity

12,000,000

Comment

Identifier

Opp5

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

Factors including increased understanding and awareness about climate change and its causes and effects, as well as policy, reputational and financial factors are driving increased client demand for our low-carbon products and services. In 2018 our Commercial Real Estate and Community Development Banking business provided \$1.6B towards financing of LEED and ENERGY STAR certified buildings while our Global Leasing business provided \$3.2B in equipment and tax equity financing for energy-efficiency projects and renewable-energy projects. Our Global Investment Banking and Debt Capital Markets groups provide equity and debt capital and advisory services to low-carbon clients (\$8.1B in 2018). Last year, our Consumer Vehicle lending group lent clients \$587M to help them purchase low-carbon vehicles.

In 2018 our Global Research team published the report “ABCs of ESG,” the latest in a series of research focused on why investors and companies should be paying attention to environmental, social and governance factors. As we note in this report, trends in the U.S. investment landscape indicate that trillions of dollars could be allocated to ESG-oriented equity investments, and thus to stocks that are attractive on ESG metrics.

According to our 2018 U.S. Trust Wealth and Worth Survey, 77% of Millennials either own or are interested in adding exposure to “impact

investing” vehicles. If 30-40% of their wealth is invested in equity ESG funds, this would equate to \$15 to \$20 trillion of asset inflows over the next two to three decades. Our research shows that the three broad groups of clients that care about ESG are high-net worth investors (who control the largest share of assets), millennial investors (the next generation of investing) and women (where 44% of women in U.S. and 74% of women globally make decisions over financial assets in their households). The Merrill Lynch 2018 Global Wealth & Investment Management Survey found that nearly 20% of financial advisors use ESG factors today and another 43% are considering their use, suggesting adoption is in its early stages. These trends create substantial opportunities for our Global Wealth and Investment Management (GWIM) business to support clients seeking to take ESG factors into account in their investing decisions. As of the end of 2018, GWIM clients had nearly \$18B in assets with a clearly defined ESG approach.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

125,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

We estimated that changing client demand for low-carbon financing represents an opportunity for \$125 billion in additional business for us from 2013 to 2025. This represents the lending, equipment finance, capital markets and advisory activities, and carbon markets finance to clients around the world to be delivered through our current \$125 billion initiative. As an illustration of this opportunity, increasing client demand helped us deliver \$21.5 billion towards our environmental business initiative in 2018.

Strategy to realize opportunity

Our Global Environmental Group (GEG) identifies and helps to actualize trends that present new business opportunities for the bank. Leaders from across our business work alongside members of the GEG to gather and report market data and other information to influence our transformational financing activities.

Our GWIM business is equipping advisors to help clients take ESG factors into account in their investment decisions through impact investing - investments made with the intent to generate measurable social and environmental impact alongside a financial return. In response to growing client demand, we have enhanced our impact investing process, platform, investment guidance and resources to help our advisors gain a deeper understanding of this area, including how to identify and address the needs of a growing number of clients.

We have added a research function to our Merrill Edge platform to help self-directed investors make informed investing decisions about thousands of U.S. equities. This capability provides ratings from MSCI ESG Research LLC, along with insight into ESG risks and opportunities to assist self-directed clients to take a company's sustainability impacts and performance into account in their investment decisions.

The activities of our GEG support the efforts of the GWIM line of business to anticipate and respond to changing client demands. We calculated the cost to realize based on the GEG's total annual operating cost.

Cost to realize opportunity

12,000,000

Comment

Identifier

Opp6

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of supportive policy incentives

Type of financial impact

Returns on investment in low-emission technology

Company-specific description

Regulations and incentives present an opportunity for us as we implement our renewable energy strategy. We have set a goal to purchase 100 percent of electricity from renewable sources by the end of 2020. The U.S. federal investment tax credit is a climate-related regulation that significantly reduces the net capital cost for onsite renewable energy installations at our facilities in the U.S. By making the financial return on investment more attractive, this tax credit has significantly improved our ability to implement onsite solar PV technology at our facilities, which is one of the strategies we are employing to achieve our renewable energy goal. We will also apply any state and local renewable energy incentives applicable to the solar projects we install at our facilities.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

8,000,000

Potential financial impact figure – maximum (currency)

16,000,000

Explanation of financial impact figure

By reducing our total tax burden, we estimate that the investment tax credit creates the opportunity to reduce the net capital cost of onsite renewable energy projects at our facilities by potentially \$8-16 million over the next three years. This is based on the expected gross capital costs of potential projects multiplied by the tax credit percentage.

Strategy to realize opportunity

We plan to realize this opportunity to capture the investment tax credit by implementing onsite solar PV projects at our U.S. facilities over the next three years. This is an important component of our strategy to achieve our goal to purchase 100 percent of electricity from renewable sources by 2020. To secure the needed funding, in presentations to decision-makers during 2017 and 2018 we have factored the tax credit into the financial performance of the initiative, and we have explained the positive impact of this tax credit. As an example, the tax credit was an important reason that we received approval to install solar PV at a financial center in 2017 and in 2018 and to install onsite solar PV across multiple locations over the next few years.

The GEG leads our efforts to achieve our environmental operations goals, including the 100 percent renewable energy goal, and the development and implementation of our renewable energy strategy. We calculated the cost to realize based on the GEG's total annual operating cost.

Cost to realize opportunity

12,000,000

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	<p>Factors including increased understanding and awareness about climate change and its causes and effects, as well as policy, reputational and financial factors are driving increased client demand for our low-carbon products and services. We also recognize that the deployment of capital is one of our biggest opportunities to have a positive environmental impact. Under our \$125 billion environmental business commitment, our businesses have developed a full suite of products and services to work with our clients to direct capital to low-carbon and sustainable business to address climate change and other demands on natural resources.</p> <p>Our Global Environmental Group (GEG) supports the hundreds of bankers dedicated to this space by identifying and helping to capitalize on emerging trends that present new business opportunities. The GEG includes subject matter experts who are dedicated to working with teams across our lines of business to evaluate opportunities and to develop and bring to market low-carbon financing products and services.</p> <p>We consider the magnitude of these opportunities and associated impacts to be medium-high.</p>
Supply chain and/or value chain	Impacted	<p>We have not identified risks or opportunities specifically related to our supply chain that exceed our \$10 million threshold for substantive. However, as part of our overall environmental commitment, we do engage with our supply chain on climate-related issues, including through our participation in the CDP Supply Chain program and by monitoring ESG risks.</p> <p>Elsewhere in our value chain, our clients' businesses may be adversely impacted by climate-related regulatory and/or physical changes. This could impact their ability to repay loans, creating credit risk for us. We manage these risks through implementation of our Environmental and Social Risk Policy Framework which is aligned with our overall Risk Framework and which outlines our approach to integrating environmental and social considerations, including climate change, into our business activities. If we did not have management processes in place the magnitude of the risks and associated impacts would be medium-high.</p>

Adaptation and mitigation activities	Impacted	<p>UNEP estimates that \$280 billion to \$500 billion of investment will be needed for global climate adaptation by 2050. This, in turn, provides an opportunity for us to provide additional products and services. Green bonds are fixed income, liquid financial instruments for raising debt capital for climate mitigation and adaptation initiatives and were created to increase funding of such initiatives by accessing the \$100 trillion bond market and expanding the investor base for climate projects worldwide. We have been a leader in developing the green bond market since it began a decade ago and we have a team dedicated to our work in this space. We worked with peers to develop the Green Bond Principles to ensure the credibility of the market, we were the first corporation to issue a benchmark sized green bond, and have led the market in underwriting. While most green bonds issued to date have focused on mitigation, there is significant potential, especially in areas such as municipal green bonds, for funds to be raised for adaptation projects and this creates opportunities for our green bonds business.</p> <p>We consider the magnitude of this opportunity and associated impacts to be medium-high.</p>
Investment in R&D	Impacted	<p>The global transition to a low-carbon economy will require new and innovative forms of finance. This creates opportunities for us to develop and bring to market additional products and services. Through partnerships such as the Global Innovation Lab for Climate Finance, we are participating in efforts to pilot new forms of innovative climate finance solutions which will be needed to broaden investment opportunities both generally, and for our company specifically, in climate mitigation and adaptation. We are one of 20 principals in the Global Innovation Lab which identifies, develops, and pilots transformative climate finance instruments and aims to drive billions of dollars of private investment into climate change mitigation and adaptation in developing countries. As a principal, we review submissions to the Lab, discuss the merits of each proposal, help improve the structure to make each idea more investable, and participate in working groups to help bring the finalist instruments to market.</p> <p>We consider the magnitude of this opportunity and associated impacts to be medium-high.</p>
Operations	Impacted	<p>With offices in Hong Kong, Japan, the Philippines, Taiwan, China and Australia, our Asian and Australian operations are vulnerable to an increase in the severity, duration and/or frequency of tropical storms experienced in these regions. Physical risks with implications for our U.S. operations include increased frequency and severity of storms with related flooding, particularly affecting the coastal southern and eastern states, and extreme heat events resulting in drought conditions and numerous wildfires across the West, Central and Southeast regions. Implications include retail outlet closures, facility repair costs, lost work time, increased utility costs, lost revenue, and increased insurance premiums. Our Building Disaster Recovery Planning (BDRP) team implements a robust business continuity program to prepare our facilities for these types of</p>

		<p>events. We consider the magnitude of this risk and associated impacts to be medium.</p> <p>An important aspect of our operations is the source of the electricity we purchase. We have set a goal to purchase 100 percent of electricity from renewable sources by 2020. The U.S. federal investment tax credit is a climate-related regulation that significantly reduces the net capital cost for on-site renewable energy installations at our facilities in the U.S. By making the financial return on investment much more attractive, this tax credit has had a significant impact on our ability to implement onsite solar PV technology at our facilities, which is one of the strategies we are employing to achieve our renewable energy goal.</p> <p>We consider the magnitude of this opportunity and associated impacts to be medium-low.</p>
Other, please specify		

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted	Factors including increased understanding and awareness about climate change, its causes and effects, as well as policy, reputational and financial factors are driving increased client demand for our low-carbon products and services. This includes renewable energy and energy efficiency financing solutions, green bonds, impact investing and low-carbon vehicle loans. This in turn drives additional revenue for our business. The magnitude is medium-high.
Operating costs	Impacted	In order to effectively manage the risks and opportunities presented to our business by climate change we are investing in internal resources including our Global Environmental Group and engaging external expertise where needed. These resources are part of the operating cost of our business. The magnitude is low.
Capital expenditures / capital allocation	Impacted	The deployment of financial capital is one of our biggest opportunities to have a positive environmental impact. Through implementation of strategies to realize our \$125 billion environmental business commitment we are directing capital to low-carbon and sustainable business to address climate change and other demands on natural resources. The magnitude is medium-high.

Acquisitions and divestments	Not impacted	Acquisitions and divestments are not part of our strategy for managing climate-related risks and opportunities. Instead, we are investing in organically growing our internal environmental expertise, both in terms of our dedicated Global Environmental Group and through training and engaging employees across our eight lines of business to incorporate climate-related risks and opportunities in their products and processes.
Access to capital	Impacted	Through our green bond issuance program, we access capital through the debt markets that we can then direct towards renewable energy and other low-carbon investments. We have issued a total of four corporate green bonds, including our most recent and largest bond of \$2.25 billion, issued in 2018. Through these corporate green bonds we have raised a total of \$4.35 billion for renewable energy projects since 2013. The magnitude is medium-high.
Assets	Impacted	<p>Related to opportunities, as a financial institution, our lending and financing activities generate assets for our business. Through implementation of strategies to realize our \$125 billion environmental business commitment we are growing our low-carbon asset portfolio. As the largest tax equity investor in wind and solar, we have built a significant portfolio of renewable tax equity investments.</p> <p>On the risk side, our clients face a range of climate-related risks and opportunities, including those driven by policy, shifting consumer demand, reputational factors and physical changes. If clients do not effectively manage these risks and opportunities, their businesses can be adversely affected which could impact their ability to repay loans or make new investments and this in turn has implications for the value of our assets. The magnitude is medium-high.</p>
Liabilities	Impacted	By issuing corporate green bonds ourselves we take on debt in order to raise capital that we then direct towards renewable energy and other low-carbon investments. The magnitude is low.
Other		

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, qualitative and quantitative

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

i) Explanation:

Integration of environmental and climate change strategy into our business strategy is overseen by our Vice Chairman who reports to the CEO and chairs our Global ESG Committee, acting as the Committee's liaison to the Board. This Committee makes recommendations to the company's management team and board of directors. This structure ensures that ESG issues including those raised by external stakeholders, are integrated into our core business decisions and are reviewed and managed at the highest levels of the company. The Committee is an integration point for various internal working groups with responsibility for environmental and social issues, including our regional ESG Committees, the Global Wealth and Investment Management Impact Investing Council, our Supplier Diversity and Sustainability working group, the Catalytic Finance Initiative Steering Committee, and the Capital Deployment Group.

There is a significant gap between the capital that must be applied to global challenges such as climate change and the amount that is being deployed now. This gap cannot be filled by the nonprofit and public sectors alone, it requires private sector engagement. This is the reason behind our focus on deploying capital for sustainable growth. This enterprise-wide initiative is designed to unlock the necessary financing to address major global and local challenges identified in the United Nations Sustainable Development Goals (SDGs), including renewable energy, energy efficiency, waterways and climate action.

There are several examples of how our business strategy has been influenced by climate change. In 2007, we announced a 10-year, \$20 billion environmental business initiative to address climate change and natural resource demands. In 2012, we exceeded this commitment four years early and in 2013 we began a new target of \$50 billion over 10 years, which then increased to \$125 billion in 2015. This is an indicator of the growing climate finance business opportunity. Since beginning our second goal in 2013, we have financed nearly \$105 billion in sustainable and low-carbon business activities. As a further example, we incorporated a climate change position into our November 2016 Environmental and Social Risk Policy Framework

(ESRPF), updated in April 2019, which provides clarity and transparency on how we identify, evaluate, measure and control environmental and social risks throughout our business.

ii) Linkage of strategy with targets:

In 2016 we set new operational goals for 2020 linked to our business strategy. These goals include becoming carbon neutral, reducing location-based GHG emissions by 50 percent, energy use by 40 percent, and water use by 45 percent globally from 2010. We committed to purchasing 100 percent renewable electricity and joined RE100, a global renewable energy initiative led by The Climate Group in partnership with CDP and part of the We Mean Business Take Action campaign. In addition, we announced our first quantitative goals to address environmental impacts in our supply chain. We aim to maintain a 90% response rate to CDP supply chain survey requests and increase the number of our CDP supply chain responding vendors who report GHG emissions to 90% by 2020.

iii) Substantial business decisions:

In 2018, we launched a new Blended Finance Catalyst Pool with an initial commitment of \$60 million and the opportunity to stimulate additional private capital to finance sustainable development in emerging and developing markets. The financing pool specifically focuses on four of the UN SDGs including energy access (SDG7), water and sanitation access (SDG6), and climate resiliency (SDG13). The initiative aims to support economic growth and result in more sustainable jobs, development and projects, as well as drive innovation.

Additionally, in 2018, we made the decision to issue our fourth and largest green bond to date totaling \$2.25 billion in aggregate principal amount. With this offering, Bank of America became the first U.S. financial institution to issue four corporate green bonds, raising a total of \$4.35 billion for renewable energy projects since 2013.

A range of climate change aspects have influenced these decisions, including physical changes, policy developments, reputational factors and changing customer demand all of which create opportunities for us to deploy capital in support of climate change mitigation and adaptation.

C3.1d

(C3.1d) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios	Details
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<p>Other, please specify</p> <p>Scenarios with sudden shocks that may affect our company over a relatively short time horizon (2 to 4 years), but would be generally consistent with a 2-degree pathway</p>	<p>Scenario selection</p> <p>During 2018, we worked with several peer institutions and a consultancy firm, Oliver Wyman, to examine transition risk related to common elements of the institutions' credit portfolios. This was a pilot to review how to identify the sensitivities of the creditworthiness of carbon-intensive companies to climate transition and develop scenario analysis techniques. The exercise had a targeted scope, focusing on two event-based scenarios: sudden implementation of a carbon tax and rapid expansion of electric vehicles.</p> <p>Key assumptions underlying the carbon tax scenario: i) the tax is non-additive (i.e., existing carbon taxes are increased to a single global rate), ii) the tax is applied to upstream producers, who pass on part of the tax to their customers and iii) the impact of a range of carbon tax values (\$25-100). This range was generally consistent with IEA Sustainable Development Scenarios and the PIK 2-degree scenario. The EV scenario is aligned with long-term trends published by Wood Mackenzie, BloombergNEF, and the IEA's New Policies, 2-Degree and EV 30 at 30 scenarios, but posits a rapid adoption of electric vehicles that displaces some fraction of conventional vehicles between 2017 and 2020. Key assumptions are i) 20% of new sales are EVs (in line with U.S. consumer preferences) versus ~1.2% today, ii) 15-year turnover rate, and no growth in total vehicles iii) 30% of the electricity used by EVs is generated by natural gas.</p> <p>Time horizon</p> <p>2017 baseline data were used to project 2018-2020 scenario-adjusted financial statements and credit ratings. The methodology allows for different baseline years, if historical data are available. Because our portfolio may shift significantly over long periods of time, the time horizon was selected to capture a period during which the consequences of the selected scenarios would be sufficient to alter business strategy.</p> <p>Areas of organization included</p> <p>The exercise had a targeted scope, focusing on a select number of representative borrowers within the upstream, midstream, downstream, and integrated oil and gas sector. This sector was selected given its prominence in the transition to a low-carbon economy and the direct relationship between the selected scenarios and the financial performance of these firms. Specific variables such as oil price and carbon tax were linked to the financial statements of the companies selected for the exercise. The</p>
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	<p>scenario-adjusted financials were then translated into a credit rating and finally into a probability of default, yielding a set of probabilities of default conditional on specific climate scenarios for the selected companies.</p> <p>Results</p> <p>The pilot examined more than 30 companies, with a broad range of revenues, existing credit ratings, and geographies. It showed that the effects of the policy changes did not materially impact our portfolio in the near term. The analysis demonstrated that climate-related policy and technology considerations can be effectively integrated into our fundamental credit analyses.</p> <p>Influencing strategy</p> <p>Our initial exploration into TCFD climate-related scenario analysis was useful in reaching qualitative conclusions that may guide future business strategy. For example, the analysis indicated there is no immediate need to alter oil and gas portfolio makeup due to near term risks from rapidly increasing carbon taxes or electric vehicle penetration. However, to make quantitative conclusions that would be truly accurate and of use to the bank and its investors, the rigor and durability of available tools and methodologies need to be enhanced over time. The pilot has been important in helping us build the capability to understand how to better model and perform climate related scenario analyses. Once the methodologies used in this pilot are further tested and refined, they can be conducted on a full portfolio basis and expanded to other sectors and integrated into business decision-making processes and disclosures.</p>
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C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

100

Base year

2010

Start year

2015

Base year emissions covered by target (metric tons CO2e)

1,813,490

Target year

2020

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

89

Target status

Underway

Please explain

This target was reported as 'Abs1' in our 2018 response. We are committing to achieve carbon neutrality for Scope 1 and 2 emissions by 2020.

Target reference number

Abs 2

Scope

Scope 1 +2 (market-based)

% emissions in Scope

100

Targeted % reduction from base year

100

Base year

2010

Start year

2015

Base year emissions covered by target (metric tons CO2e)

1,813,490

Target year

2040

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

89

Target status

Underway

Please explain

This target was reported as 'Abs2' in our 2018 response. We are committing to maintain carbon neutrality through at least 2040.

Target reference number

Abs 3

Scope

Scope 1+2 (location-based)

% emissions in Scope

100

Targeted % reduction from base year

50

Base year

2010

Start year

2015

Base year emissions covered by target (metric tons CO2e)

1,819,036

Target year

2020

Is this a science-based target?

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative

% of target achieved

100

Target status

Underway

Please explain

This target was reported as 'Abs3' in our 2018 response. In tandem with the carbon neutrality goal, we are committing to reduce our location-based emissions by 50%.

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Renewable electricity consumption

KPI – Metric numerator

Percent of electricity from renewable sources

KPI – Metric denominator (intensity targets only)

Base year

2010

Start year

2015

Target year

2020

KPI in baseline year

1

KPI in target year

100

% achieved in reporting year

91

Target Status

Underway

Please explain

Our goal is to purchase 100 percent of electricity from renewable sources. This target covers all our global operations.

Part of emissions target

Is this target part of an overarching initiative?

RE100

Target

Energy usage

KPI – Metric numerator

Energy use (GJ)

KPI – Metric denominator (intensity targets only)

Base year

2010

Start year

2015

Target year

2020

KPI in baseline year

13,927,236

KPI in target year

8,356,341

% achieved in reporting year

100

Target Status

Underway

Please explain

Our goal is to reduce energy use by 40 percent. This target covers all our global operations.

Part of emissions target

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Other, please specify

LEED certification

KPI – Metric numerator

Percent of our owned and leased space with LEED certification

KPI – Metric denominator (intensity targets only)

Base year

2010

Start year

2015

Target year

2020

KPI in baseline year

10

KPI in target year

20

% achieved in reporting year

100

Target Status

Underway

Please explain

Our goal is to maintain LEED certification in 20 percent of owned and leased space. This target covers all our global operations.

Part of emissions target

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Engagement with suppliers

KPI – Metric numerator

Response rate to our CDP supply chain information requests

KPI – Metric denominator (intensity targets only)

Base year

2010

Start year

2015

Target year

2020

KPI in baseline year

84

KPI in target year

90

% achieved in reporting year

100

Target Status

Underway

Please explain

Our goal is to maintain a 90 percent response rate to our CDP supply chain requests.

Part of emissions target

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Engagement with suppliers

KPI – Metric numerator

CDP supply chain responding vendors who report GHG emissions

KPI – Metric denominator (intensity targets only)

Base year

2011

Start year

2015

Target year

2020

KPI in baseline year

76

KPI in target year

90

% achieved in reporting year

89

Target Status

Underway

Please explain

Our goal is to increase the number of our CDP supply chain responding vendors who report GHG emissions to 90 percent.

Part of emissions target

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO₂e savings.

	Number of initiatives	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	1,200	
To be implemented*	200	2,000
Implementation commenced*	200	2,000
Implemented*	1,700	55,000
Not to be implemented	2,400	

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify

Energy efficiency projects

Estimated annual CO₂e savings (metric tonnes CO₂e)

17,000

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

5,000,000

Investment required (unit currency – as specified in C0.4)

46,710,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

3-5 years

Comment

Approximately 1,700 energy efficiency projects were implemented in 2018, including lighting and HVAC equipment and controls upgrades, data center equipment and controls upgrades, and decommissioning unneeded equipment. Since 2004, we have completed more than 16,000 efficiency projects. Since 2010, we've exited 44 data centers, consolidating our computing operations into significantly fewer buildings, which reduces overall emissions. The annual savings is an estimate.

Initiative type

Energy efficiency: Building services

Description of initiative

Other, please specify

Energy efficiency projects

Estimated annual CO2e savings (metric tonnes CO2e)

2,000

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

600,000

Investment required (unit currency – as specified in C0.4)

5,190,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

3-5 years

Comment

Approximately 1,700 energy efficiency projects were implemented in 2018, including lighting and HVAC equipment and controls upgrades, data center equipment and controls upgrades, and decommissioning unneeded equipment. Since 2004, we have completed more than 16,000 efficiency projects. Since 2010, we've exited 44 data centers, consolidating our computing operations into significantly fewer buildings, which reduces overall emissions. The annual savings is an estimate.

Initiative type

Low-carbon energy purchase

Description of initiative

Wind

Estimated annual CO2e savings (metric tonnes CO2e)

36,000

Scope

Scope 2 (market-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

61,000

Payback period

No payback

Estimated lifetime of the initiative

1-2 years

Comment

We purchase Green-e certified RECs in the U.S., U.K. REGOs and European GOs.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for other emissions reduction activities	Dedicated budget for renewable energy
Financial optimization calculations	
Internal finance mechanisms	

Employee engagement

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

Our \$125 billion environmental business initiative includes a range of financial services and products that assist our clients in reducing or avoiding GHG emissions and reducing demands on important natural resources. Since 2013, we have financed \$105 billion of clean energy, energy efficiency, water conservation, sustainable transportation, and other environmentally supportive activities. Our efforts consist of lending, equipment finance, capital markets and advisory activity, carbon finance, and advice and investment solutions for clients. Our equipment finance Energy Services team supplies financing for a wide range of energy efficiency and renewable energy assets that meet client needs in municipal, federal, education, institutions, and healthcare markets. The team works directly with established contractors and Energy Services Companies (ESCOs) to provide financing for energy conservation measures (building envelope improvements, central plant retrofits, solar assets, etc.). Our Renewable Energy Finance team provides tax advantaged capital, debt and related financial solutions to clients developing commercial and utility-scale renewable energy (wind and solar) projects. Our Commercial Real Estate Banking group provides financing for projects pursuing and using LEED certification, ENERGY STAR, brownfields redevelopment and the use of renewable energy tax credits. The Global Investment Banking and Debt Capital Markets group facilitates capital flows to clients developing and adopting clean technologies. Our

Consumer Vehicle lending group provides loans for hybrid/electric vehicle purchases while our Global Wealth and Investment Management group offers ESG investment solutions for clients. Through the provision of such financing and advisory services, we facilitate and enable energy efficiency, renewable energy and other sustainable technologies, which in turn results in reduced and/or avoided GHG emissions. We help our employees and clients reduce paper consumption through statement suppression, electronic payments, and envelope-free deposit image ATMs. Our mobile and online banking also helps reduce clients' travel to and from financial centers.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Sustainability Impact Assessment method

% revenue from low carbon product(s) in the reporting year

Comment

Level of aggregation

Group of products

Description of product/Group of products

Green bonds are fixed income, liquid financial instruments for raising debt capital for climate mitigation or adaptation projects or programs and other environmentally beneficial activities. Since green bonds first came onto the market nearly a decade ago, we have been a leader in developing the market through collaborating with peers and have been the number one green bond underwriter globally from 2013 through end of 2018 according to Environmental Finance Green Bond Database.

In 2018, we issued our fourth and largest corporate green bond for \$2.25 billion to help finance renewable energy generation, which brought our total to \$4.35 billion in directly issued corporate green bonds. Through our own issuances, we are advancing renewable energy generation by

financing new projects— such as a multistate residential solar portfolio and a wind turbine facility in Oklahoma. In 2018, we underwrote \$9.8 billion (pro rata basis) of green bonds on behalf of 40 unique clients. Last year, we coordinated inaugural issuances from several U.S. corporations including DTE Energy, Duke Energy, Public Service Company of Colorado, Alexandria Real Estate Equities, Boston Properties and Equity Residential. We also led offerings for global clients including Swire Properties, Engie, Iberdrola, National Australia Bank, Handelsbanken, and New South Wales Treasury Corporation.

Are these low-carbon product(s) or do they enable avoided emissions?

Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Green Bond Principles

% revenue from low carbon product(s) in the reporting year

Comment

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

140,489

Comment

Scope 2 (location-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

1,678,547

Comment

Scope 2 (market-based)

Base year start

January 1, 2010

Base year end

December 31, 2010

Base year emissions (metric tons CO₂e)

1,673,002

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

Other, please specify

Multiple

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition) provides the overarching methodology for the bank's GHG inventory. The following source specific documents are used as guidance for methodologies, emission factors and the collection of activity data:

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

U.S. EPA Center for Corporate Climate Leadership: Direct Emissions from Stationary Combustion Sources

U.S. EPA Center for Corporate Climate Leadership: Direct Emissions from Mobile Combustion Sources

U.S. EPA Center for Corporate Climate Leadership: Indirect Emissions from Purchased Electricity

U.S. EPA Center for Corporate Climate Leadership: Direct Fugitive Emissions from Refrigeration, Air Conditioning, Fire Suppression, and Industrial Gases

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO₂e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

85,145

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

791,166

Scope 2, market-based (if applicable)

108,614

Start date

January 1, 2018

End date

December 31, 2018

Comment

Our market-based emissions include the impact of renewable energy certificates (RECs) purchased in the United States and Guarantees of Origin (GOs) in Europe. All U.S. RECs we purchase are Green-e certified. Emissions reflect supplier-specific emission rates where available, all of which comply with Scope 2 Guidance criteria. Emissions reflect residual mix factors for European facilities. Residual mix factors are not currently available for facilities outside of Europe.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

C6.5

(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2,004,292

Emissions calculation methodology

Cradle-to-gate emissions from our purchased goods and services were calculated by aggregating our total spend data into standard vendor sector categories. The spend in each category is multiplied by sector-specific cradle-to-gate emission factors. Emissions factors are from U.K. Defra in Annex 13 of its "2012 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting." GWPs are IPCC Second Assessment Report (SAR - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Capital goods

Evaluation status

Relevant, calculated

Metric tonnes CO2e

397,794

Emissions calculation methodology

Cradle-to-gate emissions from our capital goods purchases were calculated by aggregating our total spend data into standard vendor sector categories. The spend in each category is multiplied by sector-specific cradle-to-gate emission factors. Emissions factors are from UK Defra in Annex 13 of its "2012 Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting." GWPs are IPCC Second Assessment Report (SAR - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

169,233

Emissions calculation methodology

The activity data used to quantify these activities' emissions are the quantity consumed of each energy type, such as electricity or natural gas. Consumption by fuel type is then multiplied by emission factors for each of the three activities included in this category. Emission factors for upstream emissions of purchased fuels are based on life-cycle analysis software. Emission factors for upstream emissions of purchased electricity are based on life-cycle analysis software for the U.S., and on U.K. Defra Guidelines for other countries. Emission factors for transmission and distribution losses are location-based and taken from EPA's eGRID database for the U.S., and on U.K. Defra Guidelines for other countries. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

200,813

Emissions calculation methodology

This figure encompasses emissions from armored cars, check couriers, freight shipments, mail and express shipments, and vehicles owned by our facility management partners that are dedicated to serving our facilities. Activity data for the emission sources are obtained from the internal group that manages this transportation. Emissions were calculated using EPA Emission Factors for Greenhouse Gas Inventories and Climate Leaders Mobile Source Guidance. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

23,091

Emissions calculation methodology

This figure represents emissions associated with waste disposed of via landfilling, incineration, composting, and recycling. It does not include wastewater treatment. Data on waste quantity, composition, and disposal method are obtained by our waste management providers. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM). This model calculates emissions based on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

This figure represents emissions associated with waste disposed of via landfilling, incineration, composting, and recycling. It does not include wastewater treatment. Data on waste quantity, composition, and disposal method are obtained by our waste management providers. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM). This model calculates emissions based on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

154,501

Emissions calculation methodology

Business travel includes air and rail travel, rental cars, contracted black cars, and hotel stays. Air and rail travel activity data were obtained from the bank's travel agency. Rental car and contracted black car activity data is provided by rental car and contracted black car providers. Hotel data are aggregated by bank staff. Emissions were calculated using emission factors and methodologies from the Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting, EPA Emission Factors for Greenhouse Gas Inventories, Climate Leaders Mobile Source Guidance, and Climate Leaders Business Travel and Commuting Guidance. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Explanation

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

345,389

Emissions calculation methodology

Commuting emissions include emissions from select employees utilizing shuttles that transport employees to and from work, and emissions based on distances travelled to work for all global employees. Shuttle emissions are calculated based on the miles travelled per shuttle type, amount of fuel consumed, and MPG when the amount of fuel was not available. Commuting distances were based on previous years' calculations of distance from employees' homes to primary work location as calculated with mapping software. The number of commuting days per year was based on typical patterns for office employees and those on flexible and remote work schedules, and adjusting for time off and travel days. Typical travel modes were determined using company data on employee use of public transportation and vanpools. The result was a calculation of annual commuting miles by travel mode. Total emissions for each mode of transportation, plus the shuttle emissions, were calculated using emission factors and methodologies from EPA Emission Factors for Greenhouse Gas Inventories, Climate Leaders Mobile Source Guidance, Climate Leaders Business Travel and Commuting Guidance, and Guidelines to Defra / DECC's GHG Conversion Factors for Company Reporting. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation**Upstream leased assets****Evaluation status**

Not relevant, explanation provided

Explanation

Under the operational control approach of defining our inventory boundary, emissions from all upstream leased assets are included in our Scope 1 and Scope 2 emissions.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

1,500,000

Emissions calculation methodology

This figure represents emissions associated with client travel to and from retail financial centers and ATMs. It currently does not include client travel to wealth management facilities or other facilities. Activity data used to quantify these emissions includes measured data on the number of teller and ATM visits and the average distance traveled to financial centers and ATMs. The mode of travel was assumed based on the availability of parking at facilities. Data were used to calculate total miles and gallons of gasoline consumed. Emissions were calculated using emission factors and methodologies from the EPA Emission Factors for Greenhouse Gas Inventories and Climate Leaders Mobile Source Guidance. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

We have no emissions in this category because we do not sell intermediate products that require processing into final products.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

4,000

Emissions calculation methodology

This figure represents emissions associated with client use of computers and smartphones for online banking. The activity data used to quantify these emissions include tracking data on the number and length of online and mobile banking sessions. Based on research, assumptions were developed for the mix of laptop and desktop computers as well as tablets and smartphones. The total online time is used to calculate the amount of total electricity consumed, which is multiplied by the U.S. average eGRID location-based emission factor for electricity. Computer wattage values are based on data from the EPA and industry sources. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

End of life treatment of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

20,000

Emissions calculation methodology

This figure represents emissions associated with the disposal of credit and debit cards and client mailings. Activity data used to quantify emissions include the number and weight of cards issued and the total weight and type of paper for mailings. This figure represents emissions associated with waste disposed via landfilling, incineration, and recycling. Emissions from waste are calculated using methodologies and emission factors from the EPA's Waste Reduction Model (WARM). This model calculates emissions based on a life-cycle analysis, including emissions from the long-term decomposition of waste in a landfill or from upstream sources/sinks. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Explanation

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Emissions in this category are insignificant, because we have an inconsequential amount of owned spaced that is leased to others.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

We do not operate any franchises.

Investments

Evaluation status

Relevant, not yet calculated

Explanation

To date there is not an approved methodology for calculating and disclosing emissions related to investments. We have been involved in efforts to establish a system with the Portfolio Carbon Initiative led by the World Resources Institute (WRI) and the U.N. Environment Programme Finance Initiative (UNEP FI). We are currently engaged in new efforts led by CDP and the Science Based Targets Initiative.

Other (upstream)

Evaluation status

Explanation

Other (downstream)

Evaluation status

Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO₂e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

2.1

Metric numerator (Gross global combined Scope 1 and 2 emissions)

193,759

Metric denominator

Other, please specify

Total revenue - \$ in millions

Metric denominator: Unit total

91,247

Scope 2 figure used

Market-based

% change from previous year

29

Direction of change

Decreased

Reason for change

Absolute market-based emissions decreased 24% primarily due to emission reduction activities, including consolidating space, implementing energy-efficiency projects, and purchasing renewable energy. Like others, we have also benefited from a less carbon-intensive utility grid. Total revenue increased about 4%. The net result is a decrease in emissions per unit revenue.

Intensity figure

0.95

Metric numerator (Gross global combined Scope 1 and 2 emissions)

193,759

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

204,000

Scope 2 figure used

Market-based

% change from previous year

24

Direction of change

Decreased

Reason for change

Absolute market-based emissions decreased 24% primarily due to emission reduction activities, including consolidating space, implementing energy-efficiency projects, and purchasing renewable energy. Like others, we have also benefited from a less carbon-intensive utility grid. The number of employees decreased 2%. The net result is a decrease in emissions per FTE employee.

Intensity figure

0.0024

Metric numerator (Gross global combined Scope 1 and 2 emissions)

193,759

Metric denominator

square foot

Metric denominator: Unit total

79,970,856

Scope 2 figure used

Market-based

% change from previous year

24

Direction of change

Decreased

Reason for change

Absolute market-based emissions decreased 24% primarily due to emission reduction activities, including consolidating space, implementing energy-efficiency projects, and purchasing renewable energy. Like others, we have also benefited from a less carbon-intensive utility grid.

Square feet of facility area decreased 3%. The net result is a decrease in emissions per square foot.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO ₂ e)	GWP Reference
CO ₂	55,696	IPCC Fourth Assessment Report (AR4 - 100 year)
CH ₄	25	IPCC Fourth Assessment Report (AR4 - 100 year)
N ₂ O	104	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	29,320	IPCC Fourth Assessment Report (AR4 - 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO ₂ e)
United States of America	77,967
India	1,109
United Kingdom of Great Britain and Northern Ireland	3,372
China	324
Singapore	62
Japan	82
Ireland	623
Australia	7
Italy	42
Mexico	61
South Africa	22
Russian Federation	93
Canada	182
Germany	93
Saudi Arabia	5
Brazil	28
France	112
Other, please specify Rest of world	961

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By activity

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO ₂ e)
Stationary combustion	46,384
Mobile combustion	9,441
Refrigerants	28,685
Other Fugitive	636

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO ₂ e)	Scope 2, market-based (metric tons CO ₂ e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	691,009	29,201	1,811,183	1,717,381
India	46,166	46,166	55,708	0
United Kingdom of Great Britain and Northern Ireland	25,524	4,287	90,169	79,190
China	10,584	10,584	14,598	0
Singapore	4,984	4,984	11,831	0

Japan	4,893	4,893	10,155	0
Ireland	1,000	940	2,410	1,175
Australia	1,195	1,195	1,117	0
Italy	733	1,027	2,209	0
Mexico	446	446	957	0
South Africa	437	437	460	0
Russian Federation	264	264	737	0
Canada	186	186	3,703	0
Germany	391	633	873	0
Saudi Arabia	68	68	95	0
Brazil	231	231	2,483	0
France	136	119	2,579	0
Other, please specify Rest of World	2,919	2,953	6,263	364

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By activity

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based emissions (metric tons CO ₂ e)	Scope 2, market-based emissions (metric tons CO ₂ e)
Electricity	784,035	101,483

Steam	5,828	5,828
Chilled water	1,302	1,302

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO ₂ e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	36,465	Decreased	14	We have reduced market-based emissions across our portfolio by increasing our purchased renewable energy. The resulting market-based emission reduction was 36,465 t CO ₂ e, divided by our total emissions in the previous year of 255,810 t CO ₂ e gives a 14% reduction $(36,465/255,810) \times 100 = 14\%$.)
Other emissions reduction activities	30,640	Decreased	12	We have reduced market-based emissions across our portfolio by consolidating space and implementing energy-efficiency projects. Like others, we have also benefited from a less carbon-intensive utility grid. The resulting market-based emission reduction was 30,640 t CO ₂ e, divided by our total emissions in the previous year of 255,810 t CO ₂ e gives a 12% reduction $(30,640/255,810) \times 100 = 12\%$.)
Divestment				

Acquisitions				
Mergers				
Change in output				
Change in methodology	5,054	Increased	2	Improved data quality.
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	Yes
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)	0	291,532	291,532
Consumption of purchased or acquired electricity		1,797,755	179,946	1,977,701
Consumption of purchased or acquired steam		0	25,909	25,909
Consumption of purchased or acquired cooling		0	13,919	13,919
Consumption of self-generated non-fuel renewable energy		354		354
Total energy consumption		1,798,109	511,306	2,309,415

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

246,264

Comment

Fuels (excluding feedstocks)

Distillate Oil

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

6,154

Comment

Fuels (excluding feedstocks)

Liquefied Petroleum Gas (LPG)

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

926

Comment

Fuels (excluding feedstocks)

Jet Kerosene

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

29,967

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

8,117

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

104

Comment

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.

Diesel

Emission factor

10.21

Unit

kg CO₂e per gallon

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

Distillate Oil

Emission factor

74.21

Unit

kg CO₂e per million Btu

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

Jet Kerosene

Emission factor

9.84

Unit

kg CO2e per gallon

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

Liquefied Petroleum Gas (LPG)

Emission factor

61.96

Unit

kg CO2e per million Btu

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

Motor Gasoline

Emission factor

8.78

Unit

kg CO2e per gallon

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

Natural Gas

Emission factor

53.11

Unit

kg CO2e per million Btu

Emission factor source

EPA Emission Factors for Greenhouse Gas Inventories, March 2018

Comment

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	354	354	354	354
Heat				
Steam				
Cooling				

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

Energy attribute certificates, Renewable Energy Certificates (RECs)

Low-carbon technology type

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

1,717,027

Emission factor (in units of metric tons CO₂e per MWh)

0

Comment

All U.S. RECs are Green-e certified.

Basis for applying a low-carbon emission factor

Energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Solar PV

Wind

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

80,729

Emission factor (in units of metric tons CO₂e per MWh)

0

Comment

U.K. REGOs and European GOs

Basis for applying a low-carbon emission factor

Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company

Low-carbon technology type

Solar PV

Region of consumption of low-carbon electricity, heat, steam or cooling

North America

MWh consumed associated with low-carbon electricity, heat, steam or cooling

354

Emission factor (in units of metric tons CO₂e per MWh)

0

Comment

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Energy usage

Metric value

8,313,783

Metric numerator

Gigajoules of total energy consumption

Metric denominator (intensity metric only)

N/A

% change from previous year

3

Direction of change

Decreased

Please explain

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 BAML 2018 CDP Verification Statement 5-3-19a.pdf

Page/ section reference

Whole document

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 BAML 2018 CDP Verification Statement 5-3-19a.pdf

Page/ section reference

Whole document

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

Scope

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

 BAML 2018 CDP Verification Statement 5-3-19a.pdf

Page/ section reference

Whole document

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

 BAML 2018 CDP Verification Statement 5-3-19a.pdf

Page/section reference

Whole document

Relevant standard

ISO14064-3

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Renewable energy products	ISAE 3000	We receive an annual verification of sustainability metrics including renewable energy purchases for our Environmental, Social and Governance reporting.
C8. Energy	Other, please specify Energy consumption	ISAE 3000	We receive an annual verification of sustainability metrics including energy consumption for our Environmental, Social and Governance reporting.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS

1.6

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

0

Allowances purchased

1,325

Verified emissions in metric tons CO₂e

1,325

Details of ownership

Facilities we operate but do not own

Comment

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

Two of our facilities participate in the EU ETS. Our strategy is to purchase allowances to cover our obligations, and to also consider energy efficiency and other emission reduction opportunities as appropriate and feasible. As an example of how we have applied this strategy, we have implemented

energy efficiency projects at both of these facilities in the last few years, to improve lighting and HVAC systems. We have also purchased sufficient allowances each year since our participation began.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

74

% Scope 3 emissions as reported in C6.5

52

Rationale for the coverage of your engagement

Since 2009, we have invited suppliers to respond to the CDP supply chain questionnaire, which helps us track climate change impacts and associated risks related to our global supply chain. Our selection process for inviting vendors takes into account a) environmental impact (using sector level U.K. Defra GHG emission intensity factors), b) spend (as a proxy for how much business we do with the vendor), and c) the type of business done with the vendor, such as those providing environmental services. However, if a vendor has been engaged in the past but spend with the vendor has dropped below our threshold, we continue to engage with them. We feel this level of coverage is appropriate because it addresses more than 70% of our total procurement spend.

In addition to engaging our own supply base through CDP, we continue to integrate environmental sustainability criteria into our supplier sourcing processes by providing our sourcing managers with specific questions regarding supplier sustainability practices and scoring criteria for incorporation into Requests for Proposals and Requests for Information.

Finally, our Responsible Sourcing and Supplier Diversity team is building upon our existing supplier diversity program by reviewing ESG issues and opportunities relevant to our supply chain and leading efforts to integrate them into our procurement approach.

Impact of engagement, including measures of success

In 2018, we requested disclosures from 202 suppliers. Following the survey, we provide individualized feedback regarding each vendor's level of transparency and performance to the participating vendors and their vendor managers. This has facilitated ongoing dialogue between the bank and vendors which promotes collaboration and provides us with the opportunity to recognize leadership among our highest-performing vendors.

In 2016, we set our first-ever goals to address climate change within our supply chain with two vendor engagement goals: to maintain a

response rate to CDP supply chain questionnaire of at least 90 percent, and for 90 percent of CDP supply chain responding vendors to disclose GHG emissions. Tracking progress towards these goals is a way we measure our success.

There are several indications of the impact of our engagement. In 2018, we achieved a response rate of 90 percent, and 80 percent of responding vendors reported GHG emissions.

We are proud to report that as of 2018, 64 percent of our supplier respondents have greenhouse gas emissions reduction or renewable electricity procurement goals. Seventeen suppliers that we invited to respond to the CDP supply chain survey are on the 2018 Supplier Climate A List, a ranking based on their survey responses and demonstration of strong and transparent climate strategies and emissions reduction programs.

Comment

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

0.01

% total procurement spend (direct and indirect)

0.01

% Scope 3 emissions as reported in C6.5

0.01

Rationale for the coverage of your engagement

Bank of America engages with food services vendors to reduce red meat consumption and increase the amount of spend on local produce, defined as within 400 miles of a Bank of America café. We believe that these metrics will have a positive impact on the environment and our employee's health.

Impact of engagement, including measures of success

In 2018, Bank of America purchased 145,000 pounds of red meat, and 9.7% of produce purchased was local. We hope to decrease the amount of red meat purchases in the future, and increase the amount of spend on local produce.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement

Collaboration & innovation

Details of engagement

Other – please provide information in column 5

% of customers by number

5

% Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement

We engage with our clients on GHG emissions and climate change strategies in a variety of ways.

Importantly, we are incorporating a discussion of ESG factors into our regular client engagement routines with clients in the energy and power sector to encourage their transition to low-carbon energy sources and discuss new innovative ways to finance their investment in this transition. We are also actively engaged with clients in other sectors, driving increased investment in low-carbon technologies/activities and the successful delivery of our \$125 billion environmental business goal. By way of example, we have reached out to numerous commercial, corporate and municipal clients to encourage participation in the burgeoning green bond market, and we have incorporated ESG/Impact Investing into our regular engagement with individual and institutional investor clients to grow that platform. We have created comprehensive websites about ESG investing and have trained many financial advisors to be equipped to meet the needs of their clients wanting to make impactful investments.

On individual transactions, we engage with clients when our review indicates the need for mitigation to minimize certain environmental impacts associated with the deal in question. We prioritize these types of engagements based on an evaluation of the severity of environmental risks associated with each of these transactions.

The 5% value reported under size of engagement is an estimate.

Impact of engagement, including measures of success

The growth of our green bond, ESG investing and overall low-carbon business initiatives are measures of success for our client engagement. As an indication of the impact of this engagement, increasing client demand helped us deliver \$21.5 billion towards our environmental business initiative in 2018.

Another measure of success is whether we can come to agreement among the involved parties on appropriate mitigation activities.

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

0.4

% Scope 3 emissions as reported in C6.5

0.4

Please explain the rationale for selecting this group of customers and scope of engagement

We engage by responding to client requests for information about our GHG emissions and climate change strategies. This includes responding to numerous client-specific Requests for Proposals that incorporate questions on our climate change commitments and performance. We also respond to the CDP Supply Chain survey in response to client requests for us to do so. We do not select a particularly group of clients to engage with. Rather we aim to be responsive to all client requests for information about our environmental performance and commitments.

Impact of engagement, including measures of success

Measures of success include positive feedback from the clients for which we respond to RFPs and our CDP Supply Chain score. As an indication of the impact, we were included on the 2018 Supplier Climate A List based on our CDP Supply Chain response.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Trade associations
- Funding research organizations
- Other

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

American Council on Renewable Energy

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The American Council on Renewable Energy (ACORE) is a non-profit organization dedicated to advancing the renewable energy sector through market development, policy changes, and financial innovation. ACORE works with its members to educate the public and decision makers about effective policies that will promote renewable energy development. The U.S. Partnership for Renewable Energy Finance (U.S. PREF) is managed by ACORE and is a coalition of senior level financiers who invest in all sectors of the energy industry, including renewable energy. U.S. PREF members meet with policymakers to provide their perspectives on how renewable energy finance policies affect the market, and how proposed policies could affect the market. U.S. PREF is not a lobbying organization or an advisory committee to government, rather it is an educational program that provides expert input on how the renewable energy finance market works. U.S. PREF activities include ongoing dialogue with Administration officials, members of Congress and their staffs, and other government officials involved in developing policy. When requested, PREF members provide testimony before a committee or subcommittee of Congress, or submit testimony for inclusion on the public record of a hearing. Members author white papers that provide detailed information on how the renewable energy finance market works and analyze how specific policies affect the market.

How have you influenced, or are you attempting to influence their position?

The Global Head of Power and Renewables of Investment Banking is a member of the ACORE board and participates in ACORE and U.S. PREF speaking events and in organized meetings with members of the legislative and executive branches of the U.S. government. Our goal in participating in U.S. PREF is to provide expert input to policy makers on renewable energy finance. This is with a view to informing renewable energy policies that support continued expansion of the renewable energy market in an efficient and effective way.

Trade association

American Wind Energy Association

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

The American Wind Energy Association (AWEA) focuses on the value of wind energy as an effective, fact-based mechanism to reduce carbon emissions. AWEA is the national trade association for the U.S. wind industry. With thousands of wind industry members and wind policy advocates, AWEA promotes wind energy as a clean source of electricity for American consumers. The AWEA policy team advocates for policies to promote wind energy and educates members of Congress in Washington, DC and officials in state capitals throughout the country about wind power.

How have you influenced, or are you attempting to influence their position?

Bank of America has employee representation on the AWEA Board of Directors. The Board has supervision, control, and direction of the affairs and policies of the Association. In that role, Board members hear updates, provide input at their own discretion, and may be asked to vote on various matters.

Trade association

U.S. Chamber of Commerce

Is your position on climate change consistent with theirs?

Mixed

Please explain the trade association's position

In its recently published climate change position statement, the U.S. Chamber of Commerce states its belief in a policy approach that acknowledges the costs of action and inaction and the competitiveness of the U.S. economy. The position statement calls on "policymakers to seize on an approach that rises to the challenge of climate change, leveraging business leadership and expertise, America's energy edge and our ability to innovate." The Chamber believes that an effective climate policy should leverage the power of business, maintain U.S. leadership on climate science, embrace technology and innovation, aggressively pursue energy efficiency, promote climate resilient infrastructure, support trade in U.S. technologies and products and encourage international cooperation.

How have you influenced, or are you attempting to influence their position?

We have been working proactively to engage the U.S. Chamber of Commerce in conversations about climate change and clean energy policies. We track climate and energy policy positions at the Chamber; communicate with the Chamber when its positions do not align with our own views on material climate-related issues; and work within the trade association to ensure representation of our business interests in climate action. We recently worked with other U.S. Chamber members to form a Climate Solutions Working Group to, among other things, help inform Chamber positions and advocacy on climate change and clean energy policies.

C12.3d

(C12.3d) Do you publicly disclose a list of all research organizations that you fund?

Yes

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

Through our membership in trade associations and nonprofit partnerships, we take an active public policy stance on climate change issues, advocating for a stable and predictable regulatory environment with a goal to advance clean energy and a low-carbon economy. In the U.S., we encourage the development of a clear, federal standard for GHG reductions that would give investors the certainty they need to plan. We are a member of the American Wind Energy Association, Solar Energy Industries Association and the U.S. Partnership for Renewable Energy Finance, managed by the American Council on Renewable Energy. Our goals as a member are to help unlock capital flows to renewable energy projects, provide expert input on how renewable energy finance policies affect the market and advocate for policies that promote renewables and other low-carbon energy as a clean source of electricity.

We are also members of the Ceres Network, the Center for Climate and Energy Solutions, the Business Roundtable Climate Working Group and the WRI Corporate Consultative Group. We have been a member of the Ceres network since the late 1990s and we are a key participant in and Clean Trillion Sponsor of the recurring Ceres/UN Investor Summit on Climate Risk and annual Ceres conferences.

We played a pivotal role with Ceres in developing the financial sector statement on climate change.

Through our memberships of the Global Financial Markets Association and the Association for Financial Markets in Europe we are engaging in discussions on the EU Action Plan on Sustainable Finance in support of policy-led efforts to develop a clear and detailed taxonomy for sustainable activities and establish EU labels for green financial products to enable investors to easily identify products that comply with sustainability criteria.

Our Managing Director, Climate Finance attended the 2018 COP24 event in Poland, participating in several speaking events and contributing to discussions on how to engage mainstream capital markets in low-carbon investment opportunities. This individual also participated in speaking events at the 2018 Sustainable Energy for All (SE4ALL) conference in Lisbon. He co-chairs the International Chamber of Commerce's Sustainable Finance Working Group and sits on the Board of The Climate Group and the Corporate Advisory Board of the We Mean Business coalition.

Our Global Chair of Corporate and Investment Banking is a principal with the Global Innovation Lab, a group of climate experts from governments, pension funds, investment banks, project developers and development finance institutions providing support to identify and pilot new climate finance instruments with the aim of driving billions of dollars of private investment into climate change mitigation and adaptation in developing countries.

Our Vice Chairman serves as a Commissioner on the High-Level Commission on Carbon Pricing and Competitiveness. The Commission was formed by the World Bank to provide strategic guidance on the issue of competitiveness and carbon pricing and to contribute to the Commission's flagship report on carbon pricing and competitiveness, which will be presented at the UN Secretary General's Climate Summit in September 2019 in New York.

We provide intellectual capital and fund research into policy solutions that will support the transition to a low-carbon economy, including promoting financial innovation to increase low-carbon investment and climate resilience.

We are partnering with Stanford University on the Strategic Finance Initiative (SFI). SFI aims to accelerate the scaling-up of financing for an increasingly low-carbon economy, one that is better adapted to emerging technologies and a revival of long-term sustainable growth. SFI will examine risk issues and deal structures and bring together national and sub-national players to address unique challenges in specific markets.

Since 2010, the Bank of America Charitable Foundation (BACF) has provided funding support to the UC Berkeley Center for Law, Energy and the Environment, which educates the next generation of environmental leaders and proposes policy solutions. BACF funds a Climate Change fellow position and co-sponsors the Center's Climate Change and Business Research Initiative which connects leaders from business, government, nonprofits and academia to address pressing environmental and energy needs and serves as a conduit to experts and a clearinghouse for the latest climate change policy research.

Since 2013, BACF has provided financial support to the Clean Air Task Force, whose mission is to catalyze the rapid global development of low-carbon energy and other climate-protecting technologies through research and analysis, public advocacy leadership and partnerships with the private sector. In the U.S., the Task Force works closely with leaders in Congress in a non-partisan, data driven way, to develop climate policies and regulations grounded in science, technology, and the law.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our Global ESG Committee oversees our policy engagement activities that relate to climate change and acts as an integration point for various internal working groups with responsibility for environmental and social issues. These include the regional ESG Committees, , the Global Wealth and Investment Management Impact Investing Council, the Catalytic Finance Initiative Steering Committee, and the Capital Deployment Group. Each of these groups is comprised of senior leaders from across the bank and has specific responsibilities for our environmental initiatives. Together, they ensure the bank has a robust, consistent and integrated platform for governing and executing climate change-related strategies.

Our Global Environmental Group (GEG) is responsible both for coordinating our overall climate change strategy and for leading our company's efforts to engage with policymakers on this issue. This helps to ensure that our policy engagement objectives are in alignment with our overall climate change strategy. GEG and members of our risk management groups actively communicate and work with business lines engaged with clients in low-carbon sectors as well as those that are engaged with more carbon intensive sectors to ensure that they are aware of our position on climate change and operate in accordance with that position. Our direct and indirect policy engagement efforts are aimed at supporting the competitiveness of and markets for low-carbon technologies as well as promoting greenhouse gas emissions reductions in carbon intensive sectors. Our approach is to identify and partner with a range of stakeholders, including non-governmental organizations, academics and clients whose objectives are aligned with our own, and we have several long-standing partnerships that we believe have made significant steps towards addressing the climate change mitigation challenge.

Our Environmental and Social Risk Policy Framework (ESRPF) clearly and transparently articulates our positions on and approach to sectors that we recognize as being of heightened sensitivity and importance to us and our stakeholders, including those that carry elevated climate change concerns. Implementation of our ESRPF helps to ensure that employees across our business are taking a consistent approach to management of risks in these areas. Training on our Enterprise Risk framework is mandatory for all employees. Available through this training is additional awareness material on the ESRPF. In 2018 approximately 250,000 colleagues in control functions and front line units across our business underwent enterprise risk framework training.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

 BOAML_AR2018.pdf

Page/Section reference

Pages 8, 22, 23, 28

Content elements

Governance
Strategy
Risks & opportunities
Other metrics

Comment


Publication

In voluntary communications

Status

Complete

Attach the document

 BOAML_2019_Proxy.pdf

Page/Section reference

Pages vi, 16, 21, 22, 29, 30, 31

Content elements

Governance

Strategy

Risks & opportunities

Other metrics

Comment


Publication

In voluntary communications

Status

Complete

Attach the document

 BOAML_2019_Additional_Soliciting_Materials.pdf

Page/Section reference

Page 12

Content elements

Governance
Strategy
Risks & opportunities
Other metrics

Comment

Publication

In voluntary communications

Status

Complete

Attach the document

 Environmental-and-Social-Risk-Policy-Framework.pdf

Page/Section reference

Whole document

Content elements

Governance
Strategy
Risks & opportunities
Emission targets

Other metrics

Comment


Publication

In voluntary sustainability report

Status

Complete

Attach the document

 esg-2018-highlights.pdf

Page/Section reference

Pages 2-5

Content elements

Governance

Strategy

Risks & opportunities

Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

 Bank-of-America-2018-ESG-Performance-Data-Summary.pdf

Page/Section reference

Whole document

Content elements

Emissions figures

Emission targets

Other metrics

Comment

C14. Signoff

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Financial Officer (CFO)	Chief Financial Officer (CFO)