2018 CDP Climate Change submission

Bank of America

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Introduction

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 47 million consumer and small business relationships with approximately 4,400 retail financial centers, approximately 16,100 ATMs, and award-winning digital banking with approximately 36 million active users, including 25 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 more than 35 countries. Bank of America Corporation stock (NYSE: BAC) is listed on the New York Stock Exchange. (As of July 16, 2018.)

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.

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
From: 01/01/2017	To: 31/12/2017	No

C0.3 Select the countries for which you will be supplying data.

Country	
United States	Mexico
India	South Africa
United Kingdom	Russian Federation
China	Canada
Singapore	Germany
Japan	Saudi Arabia
Ireland	Brazil
Australia	France
Italy	

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

Currency
Select from:
• U.S.D. ($)

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

Board oversight

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

- Yes

C1.1a Identify the position(s) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	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 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 • Monitoring implementation and performance of objectives • Monitoring and overseeing progress against goals and targets for addressing climate-related issues	The Global ESG Committee meets at least three 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. In 2017 for example, ESG matters, including our low carbon financing activities and operational GHG reduction goals were reviewed with the CGC during a June 2017 meeting. During 2018, ESG topics are scheduled to be discussed at three of a total of six planned CGC meetings. 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.

Below board-level responsibility

C1.2 Below board-level, provide the highest-level management 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 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.

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 three 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 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 our Supplier Diversity and Sustainability working group, 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 Supplier Diversity and Sustainability working group is building upon our existing supplier diversity program by reviewing broader ESG issues relevant to our supply chain and leading efforts to integrate them into our procurement approach. 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 four strategic areas: Transformational Finance, Operations, Employee Programs and 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 2017 to over 23,000 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 Taskforce for Climate Related Financial Disclosures (TCFD). We have formed an internal team and are divided into two focused groups, one each for transition risk and physical risk to develop our approach.

Employee incentives

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

- Yes

C1.3a Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator	Comment
Corporate executive team	Monetary reward	Emissions reduction target	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.
Environment/Sustainability managers	Monetary reward	Emissions reduction target	The Global Environmental Group is tasked with catalyzing and supporting the development of low carbon business activity, the delivery of GHG reduction targets, coordinating the monitoring and reporting of climate change activities, and engaging with our vendors on the management of climate change. The team is incentivized (monetarily and through corporate recognition), based on its success in these areas.
Business unit managers	Monetary reward	Emissions reduction target	Delivering operational GHG emissions reduction targets: teams, responsible for our internal operations, including but not exclusively the Real Estate Services team are incentivized to successfully implement activities and initiatives that support energy efficiency and manage and reduce GHG emissions.
Business unit managers	Monetary reward	Other: Managing climate change opportunities	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?	The type of incentives	Incentivized performance indicator	Comment
All employees	Monetary reward	Emissions reduction project	Incentivizing use of low carbon vehicles for employees in the U.S., Canada and UK: Our low carbon vehicle program has provided over 9,300 reimbursements since its inception in 2006. Through this initiative, employees receive a $4,000 reimbursement for the purchase or $2,000 for a lease of a new, eligible, highway-capable electric or hydrogen fuel cell vehicle. In 2017, new participants in the low carbon vehicle program achieved an estimated cumulative emissions reduction of nearly 1,100 metric tons of CO2. We have also installed multiple electric vehicle charging stations at offices across the U.S. and UK which are free for employee use.
All employees	Monetary reward	Emissions reduction project	Reducing cost of residential solar installation: In 2017, we continued our partnership with SunPower to offer employees a discount on residential solar power contracts. To date, 214 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 2017, garnering positive feedback from all involved.
All employees	Monetary reward	Efficiency project	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 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 many employees have been rewarded for their suggestions.
All employees	Other non-monetary reward	Other: Volunteer service	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 49,000 volunteer hours devoted to environmental causes. Since 2010 employees have logged over 330,000 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.
All employees	Other non-monetary reward	Other: Charitable contributions	Matching donations: The Bank of America Charitable Foundation Matching Gifts program encourages employees to contribute to qualifying charitable organizations. This program supports employee giving by offering a way to double – up to $5,000 per person each calendar year – employees’ cash or securities contributions to their favorite charitable organizations and thus improving their communities. In 2017, the Bank of America Charitable Foundation provided $28.8 million in matching gifts on behalf of employee donations.

Time horizons

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

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

Management processes

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 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
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 proposals, our work to update 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

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 three 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 describes how we identify, evaluate and control environmental and social risks as part of our overall Risk Framework. 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 understanding and effectively managing 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. We plan to issue a publicly-available white paper in late 2018 or early 2019 that will outline our approach to analyzing climate-related risk, discuss initial findings and next steps on managing the risks.

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 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.

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 reputational risk management for further evaluation. These committees are comprised of the business heads and senior executives from our Global ESG, Global Risk, Global 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 Which of the following risk types are considered in your organization's climate-related risk assessments?

Risk type	Relevance & inclusion	Please explain
Current regulation	• Relevant, always included	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. 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. This risk type is also relevant and included because our direct operations are subject to regulations, including in some jurisdictions, climate related regulations. Currently these regulations, such as the UK Carbon Reduction Commitment scheme manifest themselves as increased energy and administrative costs. While they are 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. The 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 expire, we will shift our business to other types of financing products for renewable energy.
Emerging regulation	• Relevant, always included	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 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. 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. This risk type is also relevant and included because our direct operations are subject to regulations and in some jurisdictions, climate related regulations. 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.

Risk type	Relevance & inclusion	Please explain
Technology	• Relevant, always included	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. 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.
Legal	• Relevant, always included	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 recognize in our documented 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 organizations) and the ongoing threat of litigation.' 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.
Market	• Relevant, always included	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. 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.
Reputation	• Relevant, always included	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. 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 toward 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. We assess reputational risk through implementation of our ESRPF. 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 and Reputational Risk Committees as needed to evaluate and escalate the associated risks.

Risk type	Relevance & inclusion	Please explain
Acute physical	• Relevant, always included	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. 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.
Chronic physical	• Relevant, always included	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. 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.
Upstream	• Relevant, sometimes included	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. We have completed an assessment to identify supplier categories at highest risk from flooding and we have developed detailed disaster recovery plans for suppliers in high risk categories.
Downstream	• Relevant, always included	This risk type is relevant and included because we face credit risk if our clients and 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). For example, increased flood incidence and severity could lead to customers defaulting on their mortgage payments if, for example, flood insurance premiums become unaffordable. 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.

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 key 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 and the plan to refresh it in 2018 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. Recognizing that certain sectors may be more exposed to climate change risks than others, we engage in enhanced due diligence for business activities in these sectors to evaluate the associated risks, including physical, regulatory and reputational risks. Including sectors of heightened sensitivity include arctic drilling, coal, palm oil and forestry. The ESRPF outlines our positions on these matters, including certain minimum client requirements found within our policies. 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 reputational 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:

Transitional Risk example: We acted as a joint bookrunner in a corporate-level bond issuance for a state-owned power company for a country in Asia. The company has faced protest activity by environmental activists because of their use of coal fired power as a part of their energy mix for electricity generation. The team conducted enhanced due diligence, evaluating the company's strategy and commitment to diversifying its energy mix for power generation. We decided to move forward with supporting the bond issuance once the team could confirm the client's track record in reducing dependence on fossil fuels and growth in their use of low carbon energy that includes both hydro and renewable energy sources.

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 major recovery facilities who then remediate the risk (e.g. by using another site) or escalate the risk for senior management review.

Risk disclosure

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

Identifier

Risk1

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 driver
Other: Increased risk profile for financing

Company-specific description
We have made significant progress towards financing the transition to a low carbon 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 as well as regulatory uncertainty have the potential to 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 investor in these areas in 2015, 2016 and 2017. 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 will shift our business to other types of financing products (with different risk/return characteristics) to continue to meet the capital needs of renewable projects. We are already starting to plan for and begin this transition to position ourselves for success.

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 the leading financier 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 have 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

Potential financial impact
10,000,000

Explanation of financial impact
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.

By financing companies that are developing and deploying new, more efficient technologies, we have also played a role in reducing the cost of new renewable energy development, mitigating the impact of reduced incentives.

Cost of Management
100,000

Comment
We estimate additional costs of approximately $100,000 per year for trade association membership fees.

Identifier

Risk2

Where in the value chain does the risk driver occur?
Customer

Risk Type
Transition risk

Risk Driver
Policy and legal: Other

Type of financial impact driver
Other: Increased credit risk

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 January 2018, the EU Parliament voted in favor of excluding biofuels produced from palm oil from being counted towards the EU Renewable Energy targets based on growing evidence that conventional biofuels do not contribute towards achieving GHG savings due to the issue of indirect land use change.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
Medium-high

Potential financial impact
10,000,000

Explanation of financial impact
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

We require all clients to comply with legislation, and through our ESRPF we evaluate and mitigate environmental 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.

Implementation of our ESRPF helps to ensure that employees across our business are taking a consistent approach to these topics and sectors. In 2017, we incorporated references to ESG risks and our ESRPF into training on Enterprise Risk Management that was delivered to more than 200,000 employees. Several briefings on the ESRPF were also provided to senior level teams during 2017.

Cost of Management

8,000,000

Comment

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. The total annual operating cost of the GEG is approximately $8 million. We expect to incur similar annual costs over the next decade.

Identifier

Risk3

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 driver
Other: Business disruption, employee health

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 in 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 and a lack of associated forward investment as highlighted in a March 2014 report by National Climate Assessment. Our U.S. operations experienced 63 Natural Disaster events related to hurricanes, tropical storms, flooding, heavy snow and earthquakes in 2017. Our Asia Pacific and Latin America operations are also vulnerable to climate change impacts. There were 14 Natural Disaster events (tropical storms, typhoons and flooding) in Asia Pacific and 8 Natural Disaster events (earthquakes and heavy rains) in Latin America in 2017. 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

Potential financial impact
33,000,000

Explanation of financial impact
Implications include retail outlet 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 $5 million from the hurricanes Harvey, Irma, and Maria. These costs are based natural disaster tracking records from our real estate and business continuity teams. We track work order costs on repairs after severe weather events and will use this data as it develops to understand trends associated with climate risk.

Management Method

Our Building Disaster Recovery Planning (BDRP) team prepares our facilities for natural disasters. During 2017, the team managed response and recovery for 162 global events, 85 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 2017, our U.S. Regional Support team prepared for significant natural disasters—hurricanes Harvey and Irma, winter storms with blizzard conditions, including Benjii and Stella in the U.S. Northeast; and multiple wildfires including in California—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.

Cost of Management

100,000

Comment

We estimate the additional costs of business continuity planning and recovery resulting from climate induced changes to be over $100,000 per year. We anticipate annual costs associated with our business continuity planning for as long as we are in business.

Identifier

Risk4

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 driver
Other: Increased credit risk

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 investment and other financing services to these clients.

This risk applies particularly to our investor clients and our mortgage clients. For our investor 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 or high flood risk zone, with the majority being residential loans (98%) and the remaining, commercial loans (2%).

Time horizon
Short-term

Likelihood
Likely

Magnitude of Impact
Medium-high

Potential financial impact
10,000,000

Explanation of financial impact
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
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 or social risks. In addition, in 2017 we held a series of discussions about climate resilience with 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 the bank and the clients and communities we serve. A diverse group of U.S. leaders comprise the NCAC, representing civil rights, consumer advocacy, community development and environmental sustainability organizations. Our NCAC discussions in 2017 included our forbearance program, which allows residential and small business clients to reduce or suspend their loan payments for a set period in response to temporary financial hardship due to natural disasters. The NCAC provided us with valuable insights on the needs of low income communities in the face of such events.

A priority of the philanthropic giving through Bank of America Charitable Foundation is to build resilient communities. Through this support, we strive to reduce the negative impact of future natural events. For example, our $1 million grant to The Nature Conservancy has supported its work, which was ongoing in 2017, to expand nature-based solutions to protect coastlines from rising sea levels and extreme weather.

Cost of Management
8,000,000

Comment
By supporting the effective integration of environmental risk management activities across our business and by coordinating the internal project evaluating the potential implications of physical climate change, our Global Environmental Group (GEG) is central to our management of this risk. The total annual operating cost of the GEG is approximately $8 million. We expect to incur similar annual costs over the next decade.

Identifier

Risk5

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 driver
Reputation: Reduced revenue from decreased demand for goods/services

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 are receiving an increasing 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 regarding 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

Potential financial impact
10,000,000

Explanation of financial impact
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 valuation. 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, client relationships and transactions may require enhanced due diligence due to a 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. If due diligence reveals that a business activity presents significant risk, that activity may be escalated to the appropriate Reputational Risk committee. These committees are comprised of business heads and senior executives from our Global ESG, Global Risk, Global Compliance and Legal groups, and can approve, conditionally approve, or decline a business activity. In 2017, we continued our process of tracking and externally reporting on ESRPF related items discussed by the responsible risk committees. 18 items were referred to a risk committee in 2017 due to environmental considerations.

Cost of Management
8,000,000

Comment
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. The total annual operating cost of the GEG is approximately $8 million.

Opportunity disclosure

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 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

Opportunity Driver
Development and/or expansion of low emission goods and services

Financial impact driver
Increased revenue through demand for lower emissions products and services

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 already 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. For example, many government entities have made the commitment to support and implement the Paris Agreement within their jurisdictions in the U.S. and across the globe. As an example of the opportunity for us, the Intended Nationally Determined Contributions (INDCs) developed in response to the Agreement have generated opportunities for our Catalytic Finance Initiative. The INDCs have helped us identify investment needs in 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. For example, we now know that more than 1,700 new GW of solar and wind will be required by 2030 to realize the goals of COP21, 70% of which will be in emerging markets. That has helped us assess what kinds of investment will be required and through what financial products.

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. We believe our $125 billion environmental business commitment, along with the other financial commitments made by our peers, will help mobilize the capital needed for this transition to a low carbon economy through sustainable and environmental business activities.

We were among 30 companies that signed an open letter which appeared in the Wall Street Journal expressing support for the United States remaining in the Paris Agreement. The U.S. government's decision to withdraw from the Agreement does not affect our commitment to help finance sources of renewable, clean energy as part of our approach to responsible growth.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

Potential financial impact
10,000,000

Explanation of financial impact
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 estimate is based on professional judgment by our subject matter experts within the business. This will manifest from our $125 billion environmental business initiative and through our Catalytic Finance Initiative (CFI). We originally launched our CFI in 2014 with a $1 billion commitment and a goal to stimulate at least $10 billion in new investment into high-impact clean energy projects through additional partnerships. In 2016 and 2017, following COP21, the CFI was expanded to include 11 other leading financial organizations and has led to $9.3 billion in capital commitments towards clean energy innovations and projects. These leading global financial institutions and investors are combining their efforts to increase funding and accelerate the transition to clean energy.

Strategy to realize opportunity
In response to the opportunity created by the INDCs 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. By the end of 2017, CFI partners had completed more than 20 deals in both developed and emerging markets and helped to mobilize more than $9 billion in investments. During 2017, our CFI activities included joining new investors in helping The Rise Fund – a new global impact fund – reach the hard cap of $2 billion. The fund works with entrepreneurs in a variety of sectors, including education, agriculture and food, and energy, to drive positive and measurable societal and environmental impact. We also structured a BBB-rated, 18-year, $203 million institutional loan to Vivint Solar Inc., backed by 30,000 residential solar installations in the U.S. In emerging markets, we arranged green project bonds in India and Peru, attracting foreign investment to these rapidly growing markets for clean energy. Additionally, we provided two grants to the Professional Assistance for Development Action (PRADAN) in India to set up solar micro-grids in 14 off-grid tribal villages in Gumla and Khunti, Jharkand, reaching 700 households while also supporting clean drinking water in 6 villages. The grant is also helping PRADAN mobilize resources from other donors to scale up its energy access program.

Cost to realize opportunity
8,000,000

Comment
By closely monitoring developments associated with the Paris Agreement and the INDCs, working with our lines of business on our $125 billion environmental business commitment and leading our Catalytic Finance Initiative, our Global Environmental Group (GEG) is spearheading our efforts to realize related opportunities for increasing our climate finance business. The total annual operating cost of the GEG is approximately $8 million. We expect to incur similar annual costs over the next decade.

Identifier

Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity Type
Products and services

Opportunity Driver
Development and/or expansion of low emission goods and services

Financial impact driver
Increased revenue through demand for lower emissions products and services

Description
Our renewable energy financing business lines benefit significantly 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 for renewables 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 more than quadrupled since 2013. According to Bloomberg New Energy Finance league tables, we have been recognized for the past three years as the number one tax equity provider for utility-scale wind and solar projects as well as residential solar funds in the U.S. 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.

In October 2017, the International Energy Agency (IEA) reported that renewables broke new records in 2016 driven by sharp cost reductions and policy support. According to the IEA, renewables represented almost two-thirds of new net electricity capacity additions in 2016, with almost 165 GW coming online. In 2016 new solar photovoltaics (PV) capacity around the world grew by 50%, reaching over 74 GW. For the first time, solar PV additions rose faster than any other fuel. By 2022, IEA forecasts that global renewable electricity generation will grow by more than one-third to equal the total consumption of China, India and Germany combined. IEA also forecasts that the share of renewables in power generation will reach 30%, up from 24% in 2016 and that, in the next five years, growth in renewable generation will be twice as large as that of gas and coal combined.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium

Potential financial impact
10,000,000,000

Explanation of financial impact
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 the way we are developing our business and advising clients in response to the evolving regulatory landscape for clean energy. As an example of how we actively manage this opportunity, in 2017, we facilitated the repowering of seven Texas wind farms with a $413.1 million tax equity investment with NextEra Energy Resources, the largest owner and operator of wind farms in the U.S. The repowering consisted of replacing most of the wind turbine with new components, such as blades, hubs and gearboxes, while primarily leaving the foundation and tower unchanged. Benefits include a more efficient wind farm that produces more electricity. As another example, we provided a $200 million tax-exempt master equipment lease/purchase agreement for the New York City Housing Authority (NYCHA) to modernize NYCHA's mid-century heating systems thereby delivering more consistent and comfortable heat and conserving energy. The first two schedules under the master agreement total $103.1 million and fund two Energy Performance Contracting projects, providing much-needed energy and water conservation upgrades in 41 housing developments. The first project targets 23 developments in Brooklyn. The second targets 18 of the 33 NYCHA developments damaged by the 2012 Superstorm Sandy. Projected energy cost savings over the term of the financing total $184.5 million.

Cost to realize opportunity
31,000,000

Comment
The total annual operating cost of our Renewable Energy Finance and Energy Services groups which provide financing to renewable energy projects and capital energy efficiency projects is approximately $31 million.

Identifier

Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity Type
Products and services

Opportunity Driver
Development of climate adaptation and insurance risk solutions

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

Description
We believe that bond issuances are one of the best tools for companies, municipalities and other entities to finance the $280 billion to $500 billion of investment that UNEP estimates in its 2016 Adaptation Finance Gap report will be needed for global climate adaptation by 2050. This, in turn, creates 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 (source: Bloomberg) 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. 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. 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.

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 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 in these important economic growth regions.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

Potential financial impact
7,000,000,000

Explanation of financial impact
Green bond issuances are an area of significant growth opportunity for the bank. We anticipate more than $7 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 green bonds business is key to our management of this opportunity. We have grown our Debt Capital Markets team focused on green bonds to four people and we are actively educating our relationship bankers across corporate and investment banking and public finance to be able to offer this financing tool to our clients.

In 2017 alone, we underwrote $6.5 billion (pro-rata basis) in green bonds on behalf of 41 unique clients. Since 2007, we have underwritten more than $27 billion on behalf of more than 100 clients. Our 2017 work included coordination of the first international issuance of green bonds by a Brazilian development bank, BNDES ($1 billion). We also led offerings for clients including the German development bank KfW ($1 billion), the Australian Bank Westpac (€500 million), and the Canadian Province of Ontario (C$800 million). Additionally, in 2017, we were one of the lead managers for a $500 million Water bond by NWB Bank. Proceeds from the Water Bond will be used to fund Green Bond Eligible Projects by the Dutch Water Authorities that target amongst other climate mitigation, climate adaptation and biodiversity.

Cost to realize opportunity
100,000

Comment
We estimate additional costs of over $100,000 per year in support of our green bond and other climate adaption financing activities.

Identifier

Opp4

Where in the value chain does the opportunity occur?
Direct operations

Opportunity Type
Products and services

Opportunity Driver
Shift in consumer preferences

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

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.

In 2017 our Global Research team published "ESG Part II: a deeper dive" in follow up to its 2016 report "ESG: good companies can make good stocks." The 2017 report suggests that progressive ESG practices make companies less likely to suffer large price declines, and signal significantly better three- to five-year returns on equity than their counterparts and a greater chance of long-term success. We discuss this overall theme in our 2017 ESG Update. In her letter to our stakeholders, our Vice Chairman says, "we believe the market will ultimately reward companies with responsible business practices and a long-term view."

As our clients and other stakeholders seek to address environmental challenges and opportunities in key growth markets such as the Asia-Pacific region, 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. From 2007 through end of year 2017, Bank of America Merrill Lynch has been the No. 1 underwriter of green bonds globally, according to the Environmental Finance Green Bond Database. This global leadership position has served to support the growth of our Asia-Pacific green bonds business. In 2017 we led 6 of the 7 Green Bond transactions in Asia, and from 2013-2017, we led 26 out of 37 green bonds in this region, number 1 among all banks, according to Dealogic. In early 2018, we were recognized as the Best ESG Bank in Asia in the Asset Magazine Triple 'A' Regional Awards for the second year running. Additionally, we were recently recognized by Euromoney as World's Best Bank, North America's Best Bank of Sustainable Finance, Latin America's Best Bank for Corporate Social Responsibility and Asia's Best Bank for Corporate Social Responsibility.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Potential financial impact

10,000,000

Explanation of financial impact

Reputational opportunities have possible financial implications for our company through the potential to attract new clients and drive additional revenue, improve stock price, 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. One example is the U.S. Green Building Council (USGBC) which we have supported for 20 years. In 2017 our Global Environmental Executive received the USGBC Leadership Award, recognizing her leadership of the bank's environmental strategy and in the green building movement.

In 2017, we joined the U.S. EPA Green Power Partnership, as part of our goal to purchase 100% renewable electricity by 2020. In 2017, we continued to develop our strategy to achieve this goal while maximizing positive environmental impact by implementing new innovative renewable energy generation. We increased our purchases and installed an onsite photovoltaic system at one of our financial centers. We were recognized by EPA among the top 10 purchasers of green power and as a top performer in the recent report "Corporate Sourcing of Renewables: Market and Industry Trends" by the International Renewable Energy Agency.

We also build our reputation through employee engagement. Our My Environment program drives positive environmental change by helping employees act as better environmental stewards at work, at home and in the community. In 2017, through our Recycle Now initiative, employees were asked to commit to actions to reduce waste over a 3-week period and to log their progress. Nearly 7,000 employees globally took over 187,000 actions, such as recycling and reducing plastic water bottle usage.

Cost to realize opportunity
8,000,000

Comment
By supporting the effective integration of environmental risks and opportunities across our business, spearheading our My Environment program, working with many different external stakeholders, and leading our participation in environmental events, surveys, indices and recognition programs, our Global Environmental Group helps to build our environmental reputation both internally and externally. The total annual operating cost of the GEG is approximately $8 million.

Identifier

Opp5

Where in the value chain does the opportunity occur?
Direct operations

Opportunity Type
Products and services

Opportunity Driver
Shift in consumer preferences

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

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. Opportunities exist across our lines of business. During 2017, our Commercial Real Estate and Community Development Banking business provided $981 million towards financing of LEED and EPA ENERGY STAR certified buildings while our Global Leasing business provided $2.9 billion 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 ($6.2 billion in 2017). Last year, our Consumer Vehicle lending group lent clients $342 million to help them purchase low carbon vehicles.

Research shows that investors, and particularly millennial investors, are increasingly focused on ESG factors when making investment decisions. A 2016 U.S. Trust study found that 74% of investors say they would be more likely to work with an advisor who could offer investment strategies that result in both competitive returns and a positive impact on society. A 2017 McKinsey and Co. study found that more than a quarter of the $88 trillion assets under management globally are now invested according to ESG principles and that ESG is being integrated into portfolios at a growth rate of 17% a year. This creates opportunities for our Global Wealth and Investment Management (GWIM) business. As of December 31, 2017, GWIM clients had more than $15 billion in assets with a clearly defined ESG approach. And as millennials' wealth grows, there could be an inflow of $15–20 trillion into ESG investments over the next 20 to 30 years, which would roughly double the size of the U.S. equity market. Investors increasingly understand that taking ESG performance into account isn't just the right thing to do, it may also make good business sense. In 2016 and 2017, our Global Research team authored research reports —"ESG: Good Companies Can Make Good Stocks" and "ESG Part II: A Deeper Dive"—that showed incorporating ESG factors into an investment approach can be critical to achieving one's long-term financial goals—and that ignoring ESG may be costly to investment performance.

Time horizon
Short-term

Likelihood
Likely

Magnitude of impact
Medium-high

Potential financial impact
125,000,000,000

Explanation of financial impact
We estimate 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 $17 billion towards our environmental business initiative in 2017.

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. In response to market trends and growing client demand, we enhanced our impact investing process, platform, investment guidance and resources in 2017 including a new impact investing guide to help our advisors gain a deeper understanding of the interest and opportunities in this area, including how to identify and address the needs of a growing number of clients.

For our impact investing platform, the newest research function from Merrill Edge is designed to help the self-directed investor make more informed investing decisions about thousands of U.S. equities. The new capability provides ratings from the leading research and ratings firm, MSCI ESG Research LLC, along with insight into ESG risks and opportunities. Merrill Edge self-directed clients can view information that measures a company's sustainable impact and identify values-aligned investments. Merrill Edge's new capability features access to the stock research, tools and analytics of industry-leading research providers.

In 2017, we added an ESG fund into our 401(k) plan for our employees.

Cost to realize opportunity
8,000,000

Comment
The activities of our GEG support the efforts of the GWIM line of business to anticipate and respond to changing client demands. The total annual operating cost is approximately $8 million.

Identifier

Opp6

Where in the value chain does the opportunity occur?
Customer

Opportunity Type
Markets

Opportunity Driver
Other

Financial impact driver
Other - Increased revenues from economic growth

Description
As the Shared Value Initiative asserts in its report "Banking on Shared Value", the financial success of the banking sector is inextricably linked to the long-term prosperity of its clients and communities and to sustained local and global economic growth. Through our financing activities and our philanthropic efforts, we are contributing to the transition to a low carbon economy, while creating jobs and enhancing the economic health and social well-being of communities around the world.

In 2017, we teamed up with consulting firm EY to calculate the economic impacts of our own U.S. environmental finance efforts. The analysis focused on a subset of our current $125 billion environmental business initiative and examined $12.6 billion financing deployed directly towards projects within the U.S. between 2013 and 2016. According to EY's estimate, over the course of four years, this subset supported an annual average of 40,000 jobs, realized a cumulative $30 billion in economic output, and contributed a cumulative $14.8 billion to GDP.

In the U.S., increased clean energy investment over the past decade has driven substantial growth in clean energy jobs. According to 'Now Hiring: The Growth of America's Clean Energy and Sustainability Jobs', a 2018 report by Environmental Defense Fund and Meister Consultants Group, sustainability now collectively represents 4-4.5 million jobs in the U.S., up from 3.4 million in 2011. The report also describes how jobs in energy efficiency and the renewables industry pay above U.S. national averages and cannot be easily outsourced due to the onsite nature of the work. A 2016 study prepared by ICF International for NextGen Climate America attempts to quantify the economic impacts of the transition to a low carbon economy and concludes that deep decarbonization of the U.S. economy has a net positive impact on the overall economy in terms of jobs, GDP, and income per household.

Time horizon
Medium-term

Likelihood
More likely than not

Magnitude of impact
Medium-low

Potential financial impact
10,000,000

Explanation of financial impact
Through our financing activities and our philanthropic efforts, we contribute to local economic development, while also driving the transition to the low carbon economy. Contributing to the economic and social well-being of the communities we serve can generate additional revenue for our business. While it is not possible to accurately quantify the benefits to our business, we estimate that they could cumulatively exceed $10 million, our internal threshold for 'substantive' for CDP reporting. This estimate is based on professional judgment by our subject matter experts within the business.

Strategy to realize opportunity
We have a $125 billion environmental business initiative to drive the transition to a low carbon economy. The various lines of business have developed strategies to achieve this public goal and generate low carbon business in a way that drives innovation and improves the economic health of the communities we serve.

Through community development and philanthropic programs, the Bank of America Charitable Foundation (BACF) invests in partnerships that provide sustainable solutions to challenges facing communities. As an example, we have a multi-year partnership with GRID Alternatives, the U.S.'s largest nonprofit solar installer bringing clean energy technology and job training to underserved communities through a network of community partners and philanthropic supporters. In 2017, BACF provided a $500,000 workforce development grant to support GRID Alternative's SolarCorps Fellowship Program. This Program has up to 60 fellows working with GRID Alternatives in multiple states across the country. Participants gain hands-on training and leadership skills to jumpstart their clean energy careers, while working to expand access to solar power and job training in underserved communities.

Cost to realize opportunity
22,500,000

Comment
In 2017, we provided more than $22 million in philanthropic support to organizations focused on climate change and other environmental opportunities. In support of our environmental business initiative, we will continue to invest in nonprofit organizations focused on climate change and other environmental issues.

Identifier

Opp7

Where in the value chain does the opportunity occur?
Direct operations

Opportunity Type
Energy source

Opportunity Driver
Use of supportive policy measures

Financial impact driver
Returns on investment in low-emission technology

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

Potential financial impact
15,000,000

Explanation of financial impact
By reducing our total tax burden, we estimate that the investment tax credit has the opportunity to reduce the net capital cost of onsite renewable energy projects at our facilities by potentially $5-30 million over the next two 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 US facilities over the next two 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 an operations facility in 2018.

Cost to realize opportunity
8,000,000

Comment
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. The total annual operating cost of the GEG is approximately $8 million. We expect to incur similar annual costs over the next decade.

Business impact assessment

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

Area	Impact	Description
Products and services	Impacted	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 to low carbon and sustainable business to address climate change and other demands on natural resources 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. We consider the magnitude of these opportunities and associated impacts to be medium-high.
Supply chain and/or value chain	Impacted	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 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.
Adaptation and mitigation activities	Impacted	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. We consider the magnitude of this opportunity and associated impacts to be medium-high.

Area	Impact	Description
Investment in R&D	Impacted	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. We consider the magnitude of this opportunity and associated impacts to be medium-high.
Operations	Impacted	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. We consider the magnitude of this opportunity and associated impacts to be medium-low.
Other, please specify		

Financial planning assessment

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

Area	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 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. By the end of 2017, we had issued a total of three green bonds, all of which were oversubscribed, and through these bonds raised a total of $2.1 billion. The magnitude is medium-high.
Assets	Impacted	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. 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.
Liabilities	Impacted	By issuing 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		

Business strategy

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

• Yes

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

• No, but we anticipate doing so in the next two years

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.

Aspects of climate change influencing our strategy include physical changes, policy and legislation, reputational concerns and economic incentives, all of which drive risk and opportunities for our clients. This presents us with opportunities to provide financing for climate mitigation and adaptation. Institutional investors are seeking high quality ESG research and advice that supports their investment decisions. Environmentally conscious consumers are looking for financing solutions that help them reduce their environmental impacts. Reducing our operational impact saves us money, increases our resilience, engages our employees and supports our commitment to a low carbon economy.

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 $66 billion in environmental business activities. As a further example, we incorporated a climate change position into our November 2016 Environmental and Social Risk Policy Framework (ESRPF), 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) Most substantial business decisions

In 2017 we made the decision to add two new positions within our Global Environmental Group (GEG). Our new Senior Vice President, Environmental Business Development is responsible for developing new opportunities for the bank to expand its environmental business offerings, related to climate change. This includes working closely with our eight lines of business to incubate new environmental product and service ideas and provide sales and strategic planning support in these areas. Our new Environmental and Social Risk Executive is responsible for coordinating our various ESG risk-related work streams and leading our efforts to implement the recommendations of the Task Force on Climate-Related Financial Disclosures. A range of climate change aspects create risks and opportunities for our business and have influenced this decision, including physical changes, regulatory developments, reputational factors and changing client demand. Expanding the GEG positions us to better manage the risks and capitalize on the opportunities.

C3.1g Why does your organization not use climate-related scenario analysis to inform your business strategy?

We have not yet completed scenario analysis because this is a relatively new concept for evaluating the impact of climate change on business strategies. We want to ensure a thoughtful and meaningful approach to scenario analysis specifically as well as the broader set of TCFD recommendations. We have therefore hired someone specifically with climate risk expertise to lead our efforts around this important body of work. We have formed an internal working group and have two focused teams, one each for transition risk and physical risk.

On transition risk, we are in the process of contracting expertise to help us build a methodology for assessing transition risk of a 2C degree scenario increase in temperature of a collection of companies in the oil and gas sector. On physical risk, we are in negotiations with a global company that specializes in physical risk to assess our assets in key geographies and advise us on best approaches and methodologies for assessing physical risk scenarios in select portfolios.

Over time and once we have gained experience and knowledge in both areas, we expect to expand the analysis to other lines of business of the bank. We expect to issue a white paper in late 2018 or early 2019 that will outline our approach to analyzing climate-related risk and discuss initial findings and next steps on planning for managing the risks.

Targets

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

• Absolute target

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

Target reference number	Scope	% emissions in Scope	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO2e)
Abs1	Scope 1+2 (market-based)	100%	100%	2010	2015	1804885

Target year	Is this a science-based target?	% achieved (emissions)	Target status	Please explain
2020	Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative	86%	Underway	This target was reported as 'Abs1' in our 2017 response. We are committing to achieve carbon neutrality for Scope 1 and 2 emissions by 2020.

Target reference number	Scope	% emissions in Scope	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO2e)
Abs2	Scope 1+2 (market-based)	100%	100%	2010	2015	1804885

Target year	Is this a science-based target?	% achieved (emissions)	Target status	Please explain
2040	Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative.	86%	Underway	This target was reported as 'Abs2' in our 2017 response. We are committing to maintain carbon neutrality through at least 2040.

Target reference number	Scope	% emissions in Scope	% reduction from base year	Base year	Start year	Base year emissions covered by target (metric tons CO2e)
Abs3	Scope 1+2 (location-based)	100%	50%	2010	2015	1810431

Target year	Is this a science-based target?	% achieved (emissions)	Target status	Please explain
2020	Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science-Based Targets initiative.	99%	Underway	This target was reported as 'Abs3' in our 2017 response. In tandem with the carbon neutrality goal, we are committing to reduce our location-based emissions by 50%.

Other climate-related targets

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

Target	KPI – Metric numerator	KPI – Metric denominator (intensity targets only)	Base year	Start year	Target year
Renewable energy consumption	Percent of electricity from renewable sources		2010	2015	2020

KPI in baseline year	KPI in target year	% achieved in reporting year	Target Status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
1	100	83%	Underway	Our goal is to purchase 100 percent of electricity from renewable sources. This target covers all our global operations. It was reported as 'RE1' in our 2017 response.		RE100

Target	KPI – Metric numerator	KPI – Metric denominator (intensity targets only)	Base year	Start year	Target year
Energy usage	Energy use (GJ)		2010	2015	2020

KPI in baseline year	KPI in target year	% achieved in reporting year	Target Status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
13829631	8297779	98	Underway	Our goal is to reduce energy use by 40 percent. This target covers all our global operations.		No, it's not part of an overarching initiative

Target	KPI – Metric numerator	KPI – Metric denominator (intensity targets only)	Base year	Start year	Target year
Other, please specify: LEED certification	Percent of our owned and leased space with LEED certification		2010	2015	2020

KPI in baseline year	KPI in target year	% achieved in reporting year	Target Status	Please explain	Part of emissions target	Is this target part of an overarching initiative?
10	20	100	Underway	Our goal is to maintain LEED certification in 20 percent of owned and leased space. This target covers all our global operations.		No, it's not part of an overarching initiative.

Emissions reduction initiatives

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 Identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

Stage of development	Number of projects	Total estimated annual CO2e savings in metric tons CO2e (only for rows marked *)
Under investigation	1,300	
To be implemented*	900	7,000
Implementation commenced*	900	7,000
Implemented*	3,700	147,000
Not to be implemented	1,600	

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

Activity type	Description of activity	Estimated annual CO2e savings (metric tons CO2e)	Scope	Voluntary/ Mandatory
Energy efficiency: Building services	Other, please specify: Energy efficiency projects	12000	Scope 1 Scope 2 (location-based) Scope 2 (market-based)	Voluntary
• Low-carbon energy purchase	Other, please specify: Wind	135000	Scope 2 (market-based)	Voluntary

Annual monetary savings (unit currency, as specified in C0.4)	Investment required (unit currency, as specified in C0.4)	Payback period	Estimated lifetime of the initiative	Comment
3500000	22600000	4-10 years	3-5 years	Approximately 930 energy efficiency projects were implemented in 2017, 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 11,000 efficiency projects. Since 2010, we've exited 43 data centers, consolidating our computing operations into significantly fewer buildings, which reduces overall emissions.
0	120000	>25 years	1-2 years	We purchase Green-e certified RECs in the US, UK REGOs and European GOs.

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	

Low-carbon products

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 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	Description of product/Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
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 2017 according to Environmental Finance Green Bond Database. In 2016, we issued our third and largest corporate green bond for $1 billion to help finance renewable energy generation, which brought our total to $2.1 billion in directly issued 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 2017, we underwrote $6.5 billion (pro rata basis) of green bonds on behalf of 41 unique clients. Last year, we coordinated the first international issuance of green bonds by a Brazilian development bank, BNDES ($1 billion) and led offerings for clients including the German development bank KfW ($1 billion), the Australian Bank Westpac (€500 million), and the Canadian Province of Ontario (C$800 million).	Avoided emissions	Other: Green Bond Principles		

Level of aggregation	Description of product/Group of products	Are these low-carbon product(s) or do they enable avoided emissions?	Taxonomy, project, or methodology used to classify product(s) as low-carbon or to calculate avoided emissions	% revenue from low-carbon product(s) in the reporting year	Comment
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 invested $66 billion in 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 with respect to a wide range of 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.	Avoided emissions	Other: Sustainability Impact Assessment method		

Base year emissions

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

Scope	Base year start	Base year end	Base year emissions (metric tons CO2e)	Comment
Scope 1	01/01/2010	31/12/2010	140505	
Scope 2 (location-based)	01/01/2010	31/12/2010	1669926	
Scope 2 (market-based)	01/01/2010	31/12/2010	1664381	

Emissions methodology

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 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

Scope 1 emissions data

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

Gross global Scope 1 emissions (metric tons CO2e)	Comment
82298	

Scope 2 emissions reporting

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

Scope 2, location-based	Scope 2, market-based	Comment
We are reporting a Scope 2, location-based figure	We are reporting a Scope 2, market-based figure	

Scope 2 emissions data

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

Scope 2, location-based	Scope 2, market-based (if applicable)	Comment
836052	173512	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.

Exclusions

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

Scope 3 emissions data

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

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Purchased goods and services	Relevant, calculated	2377103	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 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).	0	
Capital goods	Relevant, calculated	482404	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).	0	
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, calculated	176620	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 UK 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 UK Defra Guidelines for other countries. GWPs are IPCC Fourth Assessment Report (AR4 - 100 year).	0	

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Upstream transportation and distribution	Relevant, calculated	166262	This figure encompasses emissions from armored cars, check couriers, contracted shuttle buses, hired black cars, 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).	100	
Waste generated in operations	Relevant, calculated	24713	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).	100	
Business travel	Relevant, calculated	145361	Business travel includes air and rail travel, rental cars, and hotel stays. Air and rail travel activity data were obtained from the bank's travel agency. Rental car activity data is provided by rental 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).	100	

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Employee commuting	Relevant, calculated	350814	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 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).	0	
Upstream leased assets	Not relevant, explanation provided				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.

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Downstream transportation and distribution	Relevant, calculated	1500000	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).	0	
Processing of sold products	Not relevant, explanation provided				We have no emissions in this category because we do not sell intermediate products that require processing into final products.
Use of sold products	Relevant, calculated	4000	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).	0	

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
End of life treatment of sold products	Relevant, calculated	21000	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).	0	
Downstream leased assets	Not relevant, explanation provided				Emissions in this category are insignificant, because we have an inconsequential amount of owned spaced that is leased to others.
Franchises	Not relevant, explanation provided				We do not operate any franchises.

Sources of Scope 3 emissions	Evaluation status	Metric tons CO2e	Emissions calculation methodology	Percentage of emissions calculated using data obtained from suppliers or value chain partners	Explanation
Investments	Relevant, not yet calculated				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)					
Other (downstream)					

Emissions from biologically sequestered carbon

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

• No

Emissions intensities

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	Metric numerator (Gross global combined Scope 1 and 2 emissions)	Metric denominator	Metric denominator: Unit total	Scope 2 figure used	% change from previous year	Direction of change	Reason for change
2.9	255810	Other, please specify: total revenue - $ in millions	87352	Market-based	46	Decreased	Absolute market-based emissions decreased 43% 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.
1.2	255810	Full-time equivalent (FTE) employee	209000	Market-based	44	Decreased	Absolute market-based emissions decreased 43% 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 increased 0.5%. The net result is a decrease in emissions per FTE employee.
0.0031	255810	Square foot	82321028	Market-based	44	Decreased	Absolute market-based emissions decreased 43% 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 increased 2%. The net result is a decrease in emissions per square foot.

Scope 1 breakdown: GHGs

C7.1 Does your organization have greenhouse gas emissions other than carbon dioxide?

• Yes

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

Greenhouse gas	Scope 1 emissions (metric tons in CO2e)	GWP Reference
CO2	52921	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	24	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	97	IPCC Fourth Assessment Report (AR4 - 100 year)
HFCs	29256	IPCC Fourth Assessment Report (AR4 - 100 year)

Scope 1 breakdown: country

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States	75,253
India	1,139
United Kingdom	3,677
China	162
Singapore	45
Japan	80
Ireland	570
Australia	8
Italy	173

Country/Region	Scope 1 emissions (metric tons CO2e)
Mexico	59
South Africa	18
Russian Federation	102
Canada	154
Germany	0
Saudi Arabia	5
Brazil	43
France	11
Other, please specify: Rest of World	799

Scope 1 breakdown: business breakdown

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

- By activity

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

Activity	Scope 1 emissions (metric tons CO2e)
Stationary combustion	44,362
Mobile combustion	8,680
Refrigerants	28,620
Other Fugitive	636

Scope 2 breakdown: country

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

Country/ Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	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	721452	86534	1867479	1619460
India	48491	48491	58773	0
United Kingdom	31860	3134	90626	82600
China	13577	13577	17554	0
Singapore.	6189	6189	11956	0
Japan	5020	5020	11257	0
Ireland	1065	1886	2478	0
Australia	1,491	1491	1380	0
Italy	893	1029	2212	0
Mexico	937	937	2078	0

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	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)
South Africa	443	443	507	0
Russian Federation	321	321	731	0
Canada	209	209	3722	0
Germany	271	411	566	0
Saudi Arabia	198	198	261	0
Brazil	144	144	1750	0
France	29	22	476	0
Other, please specify: Rest of World	3462	3476	7253	410

Scope 2 breakdown: business breakdowns

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

• By activity

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity	828,703	166,163
Steam	5,998	5,998
Chilled Water	1,351	1,351

Emissions performance

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 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.

Reason	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	134829	Decreased	30	We have reduced market-based emissions across our portfolio by increasing our purchases renewable energy. The resulting market-based emission reduction was 134,829 t CO2e, divided by our total emissions in the previous year of 452,557 t CO2e gives a 30% reduction (134,829/452,557)*100 = 30%.]
Other emissions reduction activities	61829	Decreased	14	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 61,829 t CO2e, divided by our total emissions in the previous year of 452,557 t CO2e gives a 14% reduction (61,829/452,557)*100 = 14%.
Divestment				
Acquisitions				
Mergers				
Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

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

Energy spend

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%

Energy-related activities

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

Activity	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 Report your organization's energy consumption totals (excluding feedstocks) in MWh.

Response options.

Please complete the following table:

Activity	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Consumption of fuel (excluding feedstock)	• HHV (higher heating value)	0	277312	277,312
Consumption of purchased or acquired electricity	N/A	1702176	337960	2040136
Consumption of purchased or acquired heat	N/A	0	0	0
Consumption of purchased or acquired steam	N/A	0	26475	26475
Consumption of purchased or acquired cooling	N/A	0	14448	14448
Consumption of self-generated non-fuel renewable energy	N/A	294	N/A	294
Total energy consumption	N/A	1702470	656195	2358665

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

Fuel application	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
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 State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels	Heating value	Total MWh consumed by the organization	MWh consumed for self-generation of electricity
Natural Gas	HHV	235068	N/A
Distillate Oil	HHV	5931	N/A
Liquefied Petroleum Gas (LPG)	HHV	1227	N/A
Jet Kerosene	HHV	27201	N/A
Motor Gasoline	HHV	7457	N/A
Diesel	HHV	428	N/A

MWh consumed for self-generation of heat	MWh consumed for self-generation of steam	MWh consumed for self-generation of cooling	MWh consumed self-cogeneration or self-trigeneration
N/A	N/A	N/A	N/A

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

Fuel	Emission factor	Unit	Emission factor source	Comment
Natural Gas	53.11	kg CO2e per million Btu	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	
Distillate Oil	74.21	kg CO2e per million Btu	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	
Liquefied Petroleum Gas (LPG)	61.96	kg CO2e per million Btu	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	
Jet Kerosene	9.84	kg CO2e per gallon	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	
Motor Gasoline	8.78	kg CO2e per gallon	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	
Diesel	10.21	kg CO2e per gallon	EPA Emission Factors for Greenhouse Gas Inventories, March 2018	

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

Energy Carrier	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	294	294	294	294
Heat				
Steam				
Cooling				

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	Low-carbon technology type	MWh consumed associated with low-carbon electricity, heat, steam or cooling	Emission factor (in units of metric tons CO2e per MWh)	Comment
Energy attribute certificates, Renewable Energy Certificates (RECs)	Wind	1619166	0	All U.S. RECs are Green-e certified.
Energy attribute certificates, Guarantees of Origin	Wind, solar PV	83010	0	UK REGOs and European GOs
Off-grid energy consumption from an on-site installation or through a direct line to an off-site generator owned by another company	Solar PV	294	0	

Other climate-related metrics

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

Description	Metric value	Metric numerator	Metric denominator (intensity metric only)	% change from previous year	Direction of change	Please explain
Energy usage	8,491,086	Gigajoules of total energy consumption		4	Decreased	

Verification

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

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

Scope	Verification or assurance cycle in place	Status in the current reporting year	Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported emissions verified (%)
Scope 1	• Annual process	Complete	Limited assurance		Whole document	• ISO14064-3	100
• Scope 2 location-based	• Annual process	Complete	Limited assurance		Whole document	• ISO14064-3	100
• Scope 2 market-based	• Annual process	Complete	Limited assurance		Whole document	• ISO14064-3	100

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

Scope	Verification or assurance cycle in place	Status in the current reporting year	Attach the statement	Page/section reference	Relevant standard
Scope 3—all relevant categories	• Annual process	Complete		Whole document	ISO14064-3

Other verified data

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 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 report.
• 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 report.
• 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 report.

Carbon pricing systems

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

• EU ETS

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

System name	% of Scope 1 emissions covered by the ETS	Period start date	Period end date
EU ETS	1.6	1/1/2018	31/12/2018

Allowances allocated	Allowances purchased	Verified emissions in metric tons CO2e	Details of ownership	Comment
0	1321	1321	Facilities we operate but do not own	

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.

Project-based carbon credits

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

• No

Internal price on carbon

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

• No, and we don't anticipate doing so in the next two years

Value chain engagement

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

- Yes, our suppliers
- Yes, our customers

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

Type of engagement	Details of engagement	% of suppliers by number	% total procurement spend (direct and indirect)	% Scope 3 emissions as reported in C6.5	Rationale for the coverage of your engagement	Impact of engagement, including measures of success
Information collection (understanding supplier behavior)	Collect climate change and carbon information at least annually from suppliers	1	62	36	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 UK 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 60% 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 enterprise-wide Supplier Diversity and Sustainability working group is building upon our existing supplier diversity program by reviewing ESG issues relevant to our supply chain and leading efforts to integrate them into our procurement approach.	In 2017, we requested disclosures from 195 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 our 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 information requests of at least 90 percent, and for 90 percent of CDP supply chain responding vendors to disclose GHG emissions. Tracking progress toward these goals is a way we measure our success. There are several indications of the impact of our engagement. In 2017, we achieved a response rate of 88 percent, and 78 percent of responding vendors reported GHG emissions. We are proud to report that in 2017, 65 percent of our supplier respondents have greenhouse gas emissions reduction or renewable electricity procurement goals. Thirteen suppliers that we invited to respond to the CDP supply chain survey are on the 2017 Supplier Climate A List, a ranking based on their survey responses and demonstration of strong and transparent climate strategies and emissions reduction programs. We have been recognized for a second year in a row as one of 29 companies on CDP's supplier engagement leader board for engaging our suppliers on carbon emissions and climate-related risks over the past year.

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

Type of engagement	Details of engagement	Size of engagement	% Scope 3 emissions as reported in C6.5	Please explain the rationale for selecting this group of customers and scope of engagement	Impact of engagement, including measures of success
Collaboration & innovation	Other	5%	0%	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. Through this and other engagement with clients, we are 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. We also engage with a wide range of clients in the energy sector – from producers to generators – to encourage and assist them in transitioning to lower carbon energy sources. 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.	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 $17 billion towards our environmental business initiative in 2017. Another measure of success is whether we can come to agreement among the involved parties on appropriate mitigation activities.
Education/ information sharing	Run an engagement campaign to educate customers about your climate change performance and strategy	0.2	0.2	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 select the group of clients to engage based on those that request our response. We prioritize these requests by aiming to be responsive to all of them.	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 2017 Supplier Climate A List based on our CDP Supply Chain response.

Public policy engagement

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?

- Direct engagement with policy makers
- Trade associations
- Funding research organization
- Other

C12.3a On what issues have you been engaging directly with policy makers?

This question only appears if you select "Direct engagement with policymakers" in response to C12.3.
Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Climate finance	Support	In 2017, we engaged with the Governor's office in California to advocate for extensions of carbon offset provisions in AB 32 (The 2006 California Global Warming Solutions Act).	We advocated for extensions of carbon offset provisions in the AB 32 regulatory framework.

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

- Yes

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

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
American Council on Renewable Energy	Consistent	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.	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.
American Wind Energy Association	Consistent	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.	The Global Head of Power and Renewables of Investment Banking is on the AWEA Board of Directors and holds the position of Treasurer. 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	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
U.S. Chamber of Commerce	Mixed	The US Chamber of Commerce's climate change issue brief states: "Climate change is a serious challenge that needs to be addressed through thoughtful policies that will have a meaningful impact. The Chamber supports efforts to reduce greenhouse gas emissions and believes technology and innovation offer the greatest potential to reduce emissions and mitigate the negative impacts of climate change. The best solutions are going to come from the private sector—or the private sector working together with government. There should be an approach that does not harm the economy; recognizes that the problem is international in scope; and aggressively promotes new technologies and efficiency. Protecting our economy and the environment for future generations are mutually achievable goals."	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 are also working with the Chamber to actively engage members who have interests similar to our own. At Chamber meetings, we actively share our perspectives on market trends, policies, strategies, and technologies to reduce greenhouse gas emissions and maximize climate-positive business opportunities.

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

• Yes

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

Through our membership in trade associations and partnership with nonprofit organizations, 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 for the future. 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, Ceres and the Center for Climate and Energy Solutions (C2ES). Our goal as members of these groups is 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.

Following our active participation in the 2015 Paris COP21 event, our Managing Director, Climate Finance attended the 2017 COP23 event in Bonn, Germany, participating in several speaking events and discussions. These included lessons learned from our Catalytic Finance Initiative, how to scale up the $100 billion by 2020 climate finance commitment made during COP15 in Copenhagen, and engaging mainstream capital markets in low carbon investment opportunities.

Our Managing Director, Climate Finance 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 cutting edge climate finance instruments with the aim of driving billions of dollars of private investment into climate change mitigation and adaptation in developing countries.

We participate in the C2ES Business Environmental Leadership Council (BELC) and attend BELC calls and meetings. According to C2ES, BELC is the largest U.S.-based group of companies focused on addressing climate change challenges and supporting mandatory climate policy. We have been a member of the Ceres coalition since the late 1990s and have been a key participant and Clean Trillion Sponsor of the recurring Ceres UN Investor Summit on Climate Risk and annual Ceres conferences. We engage with Ceres in climate policy related activity and played a pivotal role with Ceres in developing the financial sector statement on climate change.

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. The public work we support is directly aligned with our strategy and includes the advancement of low carbon technologies as well as solutions for building climate change 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. The Initiative has published many studies including on transportation, renewable energy, water and energy efficiency and energy storage, to inform California's decision-makers on policies necessary for businesses to prosper in the era of climate change.

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 the Administration and 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 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, Supplier Diversity and Sustainability working group, 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. In 2017, we incorporated references to ESG risks and our ESRPF into training on Enterprise Risk Management that was delivered to more than 200,000 employees. Several briefings on the ESRPF were also provided to senior level teams during 2017, including our Europe and Middle East Legal leadership team and Asia-Pacific region leadership team.

Communications

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	Status	Attach the document	Content elements
In mainstream reports	Complete	Attach annual report	Governance Strategy Risks & Opportunities Other metrics
In voluntary communications	Complete	Attach proxy statement	Governance Strategy Risks & Opportunities Other metrics
In voluntary communications	Complete	Attach additional solicitation materials	Governance Strategy Risks & Opportunities Emission targets Other metrics
In voluntary sustainability report	Complete	Attach ESG Update	Governance Strategy Risks & Opportunities Emission targets Other metrics
In voluntary sustainability report	Complete	Attach ESG Performance Data	Emissions figures Emission targets Other metrics

Sign-off

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

Job title	Corresponding job category
Chief Financial Officer (CFO)	• Chief Financial Officer (CFO)

Supply chain introduction

SC0.0 If you would like to do so, please provide a separate introduction to this module.

SC0.1 What is your company's annual revenue for the stated reporting period?

Annual revenue
87352000000

SC0.2 Do you have an ISIN for your company that you would be willing to share with CDP?

- Yes

SC0.2a Please use the table below to share your ISIN.

ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
U.S.	0605051046

Allocating your emissions to your customer

SC1.1 Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
AT&T	Scope 1	106	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
AT&T	Scope 2	1082	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Alliance Data Systems	Scope 1	11	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Alliance Data Systems	Scope 2	115	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Alliance Data Systems	Scope 2	115	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
MetLife	Scope 1	5	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
MetLife	Scope 2	54	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
NRG Energy	Scope 1	3	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
NRG Energy	Scope 2	33	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Caesars	Scope 1	1	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Caesars	Scope 2	14	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Avianca	Scope 1	1	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Avianca	Scope 2	12	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.

Requesting member	Scope of emissions	Emissions in metric tons of CO2e	Uncertainty (± %)	Major sources of emissions	Verified*	Allocation method	Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Accenture	Scope 1	0.02	20	Stationary combustion, mobile combustion, refrigerants, and other fugitive emissions	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Accenture	Scope 2	0.2	20	Purchased electricity, steam, and chilled water	No	Allocation based on the market value of products purchased	We include in our inventory all Scope 1 and 2 GHG sources under our operational control. This includes all owned and leased facilities and vehicles. To ensure that all our facilities are included in the inventory, we consult our facility database each year to ensure that the facility list is up to date. Through discussions with our Real Estate Services group we ensure that all emissions sources associated with our facilities are identified and included in the inventory. We also work with this group and with our fleet management personnel to identify vehicles that are under our operational control for inclusion in the inventory.
Virgin Money	Scope 1	0			No	Allocation based on the market value of products purchased	We had zero revenue from Virgin Money in 2017, and therefore zero emissions.
Virgin Money	Scope 2	0			No	Allocation based on the market value of products purchased	We had zero revenue from Virgin Money in 2017, and therefore zero emissions.

SC1.2 Where published information has been used in completing SC1.1, please provide a reference(s).

We use primary data based on our own emissions and revenue to allocate emissions. We do not use published industry average data. As our goods and services are primarily non-physical, we use an economic allocation approach based on market value, as defined by the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. Revenue is used as the market value metric. To allocate Scope 1 emissions to a client, corporate total Scope 1 emissions are multiplied by the ratio of the client's spend with us versus our total revenue. The same approach is taken for Scope 2 emissions.

SC1.3 What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	The operations of our businesses and support lines are highly integrated, utilizing a central shared services infrastructure for many functions. As a result, the only feasible means for us to allocate emissions to our clients is to use corporate level data, rather than business line or facility level data.

SC1.4 Do you plan to develop your capabilities to allocate emissions to y our customers in the future?

- No

SC1.4b Explain why you do not plan to develop capabilities to allocate emissions to your customers.

We anticipate that the economic allocation approach that we currently use to allocate emissions to clients will be the most appropriate approach for the foreseeable future.

Collaborative opportunities

SC2.1 Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP supply chain members.

Change from 2017

Modified question (2017 SM2.1)

Connection to other frameworks

SDG

Goal 7: Affordable and clean energy

Response options

Please complete the following table. You are able to add rows by using the "Add Row" button at the bottom of the table.

Requesting member	Group type of project	Type of project	Emissions targeted	Estimated timeframe for carbon reductions to be realized	Estimated lifetime CO2e savings	Estimated payback	Details of proposal
AT&T							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
Alliance Data Systems							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
MetLife							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
NRG Energy							We are interested in renewable energy and carbon offset programs, or other emission reduction initiatives you are considering.
Caesars							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
Avianca							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
Accenture							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.
Virgin Money							We do not have a specific proposal, but we would be happy to discuss collaboration on any initiatives you are considering.

SC2.2 Have requests or initiatives by CDP supply chain members prompted your organization to undertake organizational-level emissions reduction initiatives?

• No

Action Exchange

SC3.1 Do you want to enroll in the 2018-2019 CDP Action Exchange initiative?

• No

SC3.2 Is your company a participating supplier in CDP's 2017-2018 Action Exchange initiative?

• No

Product (goods and services) level data

SC4.1 Are you providing product level data for your organization's goods or services, and, if so, what functionality will you be using?

• No, I am not providing data