



# Task Force on Climate-related Financial Disclosures (TCFD) Report

Managing our Future

BANK OF AMERICA 





# Bank of America's Task Force on Climate-related Financial Disclosures (TCFD) Report

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# Cautionary Information and Forward-Looking Statements

This report contains statements regarding Responsible Growth, as well as environmental, social and governance information and opinions, in each case which may include metrics, aspirations, targets, goals, commitments, cumulative values and sustainability strategy (all of the foregoing and any other contents of this report being, collectively, the ESG Information), in connection with Bank of America Corporation's application of the Task Force on Climate-related Financial Disclosures recommendations. ESG Information may consider disclosure recommendations and broader definitions of materiality used by certain voluntary external frameworks and reporting guidelines that differ from mandatory regulatory reporting, including the U.S. Securities and Exchange Commission (SEC). Accordingly, any such ESG Information may be presented from a different perspective and in more detail than in Bank of America's regulatory reporting, and materiality and any use of the term "material" in the context of the ESG Information may be distinct from such term as defined for SEC reporting purposes. Any inclusion of ESG Information is not an indication that the subject or information is material to Bank of America Corporation for SEC reporting purposes. Additionally, ESG Information is based on current or historic goals, targets, commitments, estimates, assumptions, standards, methodologies and internal control frameworks and currently available data, which continue to evolve and develop. ESG information and any statements made in connection therewith are not guarantees or promises that any metrics, aspirations, goals, targets or commitments will be met. The ESG Information is as of the date referenced, subject to change without notice and may be regarded as indicative and for illustrative purposes only. The ESG Information may vary based on applicable laws, rules and regulations and in different geographic areas. The ESG Information may also include the use of non-financial metrics and/or other information that are subject to significant measurement uncertainties, which may include the methodology, collection and verification of data, various estimates and assumptions, and/or underlying data that is obtained from third parties, some of which cannot be independently verified.

Additionally, certain statements contained in this report may constitute "forward-looking" statements within the meaning of the Private Securities Litigation Reform Act, including statements about future financial performance and business and ESG Information, which may evolve over time. Words such as "anticipates," "believes," "expects," "targets," "intends," "plans," and similar expressions are used to identify forward-looking statements. Forward-looking statements reflect management's current expectations, plans or forecasts, are not guarantees of future results or performance, involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and often beyond Bank of America Corporation's control and are inherently uncertain. You should not place undue reliance on any forward-looking statement. Actual outcomes and results may differ materially from those expressed in, or implied by any of these forward-looking statements due to a variety of factors, including global socio-demographic and economic trends, energy prices, technological innovations and advances, climate-related conditions and weather events, legislative and regulatory changes, public policies, engagement with clients, suppliers, investors, government officials and other stakeholders and other unforeseen events or conditions, as well as the uncertainties and risks discussed in Bank of America Corporation's 2021 Annual Report on Form 10-K and subsequent SEC filings. Forward-looking statements speak only as of the date they are made, and Bank of America Corporation undertakes no obligation to update or revise any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made. Additionally, this report may contain statements based on hypothetical or severely adverse scenarios and assumptions, which may not occur or differ significantly from actual events. These statements should not necessarily be viewed as being representative of current or actual risk or forecasts of expected risk.

Website references and/or links throughout this report are provided for convenience only, and the content on the referenced websites is not incorporated by reference into this report. Such website references and/or links do not imply an affiliation, sponsorship, endorsement, etc.

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# Letter from Brian Moynihan



At Bank of America, we have a common purpose: to help make financial lives better. The work we do to deliver for our clients, teammates, shareholders and communities is embedded in all of our operations and integral to how we run our company. We call it Responsible Growth. I discuss it in detail in my letter to shareholders in our 2021 Annual Report.

We align all of our activities to help create economic prosperity and also address important societal priorities. This means we bring to the task our \$3.4 trillion balance sheet, our \$60 billion in annual spending, the trillions of dollars in capital we raise each year for our clients, and the volunteer efforts of more than 200,000 employees – in addition to our philanthropic initiatives. This includes doing all we can to tackle the impacts of climate change. For many years, we have been working to reduce the environmental impact of our own business and operations. We are carbon neutral and have committed to achieving Net Zero in our financing activities, operations and supply chain before 2050.

We believe in the power of the private sector to solve the world's greatest challenges. Bank of America is working with many other companies and entities to help shape a just transition toward the low-carbon, sustainable energy future. Working with clients in every sector, we are making significant progress on the sustainable finance goal we set in 2021 to mobilize and deploy \$1.5 trillion by 2030, including \$1 trillion aligned to the environmental transition. As part of this, we provide financing to help small businesses adopt more sustainable business practices, as well as work with major corporations across industries to develop clean energy solutions even as they work to provide affordable energy today. That's all part of our support for a just transition.

Continued progress depends upon the collective efforts of governments, corporations, individuals and nonprofits. We work in many coalitions, including the World Economic Forum's International Business Council, which I am pleased to chair; the Sustainable Markets Initiative, which was launched by His Majesty King Charles III in his former role as His Royal Highness The Prince of Wales at the World Economic Forum's annual meeting at Davos in January 2020; the Net-Zero Banking Alliance within the Glasgow Financial Alliance for Net Zero; the Council for Inclusive Capitalism; and the UN Global Investors for Sustainable Development Alliance, among others.

As we pursue these objectives, we also consider the associated risks climate change presents to the business community, our activities and investments. We are disclosing these risks to provide transparency to our stakeholders so they can better assess the long-term value creation on which we are focused.

The Task Force on Climate-related Financial Disclosures (TCFD) provides a consistent mechanism for companies to provide information regarding their climate-related financial risks. It is an important complement to our other disclosures, including the Stakeholder Capitalism Metrics in our Annual Report that help companies across industries measure and disclose how they are addressing societal priorities through their business activities and operations.

We are publishing this TCFD Report with updates on progress toward our Net Zero commitment and to share more comprehensive information regarding our approach to climate-related risks. The TCFD report provides a clear, straightforward discussion of how we are managing these matters to help us do what we do each day: deliver Responsible Growth.

Thank you,

**Brian Moynihan**  
Chair and CEO, Bank of America

A stylized, handwritten signature of Brian Moynihan in black ink.



# Introduction

To achieve our core mission to deliver Responsible Growth,<sup>1</sup> we know it is imperative to address climate change in a comprehensive, forward-looking manner and to integrate the management of climate-related risks and opportunities throughout our enterprise strategy.

Understanding the manifold global impacts of climate change is the first step in this endeavor. In its multi-part Sixth Assessment Report, the Intergovernmental Panel on Climate Change (IPCC) noted the increased severity in physical impacts such as wildfires, droughts, sea-level rise and super storms. These impacts are expected to grow exponentially if the average global temperature rises past 1.5° C above pre-industrial levels (1.5° C).<sup>2</sup> Beyond these physical impacts, the IPCC has also warned that climate change can have a direct impact on human health around the planet, including an increase in respiratory illnesses and other communicable diseases. The totality of the potential impact of climate change is difficult to measure in economic terms, but the IPCC has proffered that the more temperatures rise over the course of the century, particularly beyond 1.5° C, the greater the losses will be in global gross domestic product (GDP).<sup>3</sup>

Addressing these risks presents significant opportunities that are equally vital to a robust climate strategy. As highlighted in a Bank of America Global Research Report,<sup>4</sup> the International Energy Agency (IEA) estimates investments totaling \$150 trillion will be required over the next three decades to transition to a net zero<sup>5</sup> (Net Zero) greenhouse gas (GHG) emissions economy. This translates to \$5 trillion per year for the next 30 years – an increase of eight times current levels.

To help measure and mitigate climate-related risks and harness related opportunities, it is incumbent upon companies to assess and disclose how their business strategies incorporate climate change, in particular climate-related risks and how they are managed. The public sector has an important role to play, as do non-profits and philanthropic organizations, but we believe that companies like ours are in a uniquely influential position to harness the available capital, talent, innovation and funds needed for the expeditious transition to a Net Zero GHG emissions economy. This dynamic makes it even more important for companies to publicly report on their strategy and progress.

At Bank of America Corporation (Bank of America or the Company), our enterprise climate strategy is centered on minimizing Bank of America's impact on the environment

by striving to achieve Net Zero before 2050, inspiring and enabling clients to achieve Net Zero before 2050 and assessing and managing climate-related risks, including those risks associated with not achieving Net Zero.

We have mobilized the Company to execute this strategy and address the societal challenge by educating employees on climate risks and opportunities and how they relate to their business functions; enhancing our processes to identify, measure, monitor and control climate risks, and most importantly, positioning ourselves to support our clients in their transition. Specifically, we are assisting clients by providing lending, capital raising, advisory, investment services, and other financial solutions such as climate- and blended finance-focused partnership vehicles and funds.

To help ensure a harmonized approach across the enterprise, we established an Enterprise Climate Program under which executives across our lines of business (LOBs), Environmental, Social and Governance (ESG), Public Policy, Global Risk Management (GRM), Global Sustainable Finance, and Enterprise Credit drive climate action across our eight LOBs and seven risk types. Under this company-wide program, we are integrating our climate strategy across all aspects of our business, from client onboarding and underwriting to deal selection and risk management.

Underpinning an effective climate strategy must be a common framework for measurement and reporting. The Taskforce on Climate-related Financial Disclosures (TCFD) provides such a framework for clear, consistent standards on disclosing information on how companies address climate-related risks and opportunities. We supported the development of these standards and issued our first TCFD report in April 2020 ([2020 TCFD Report](#)).

This document provides an update on our developments over the past two years (from April 2020 to August 2022) to address climate risk and the corresponding opportunities, including organizational changes, commitments made and actions taken as we forge ahead in this critical decade. Please see key highlights on the next page.

<sup>1</sup> Based on four tenets: We must grow and win in the market – no excuses; We must grow with our customer-focused strategy; We must grow within our risk framework; and We must grow in a sustainable manner.

<sup>2</sup> IPCC Sixth Assessment Report <<https://www.ipcc.ch/report/ar6/wg1/>>

<sup>3</sup> IPCC Special Report: Global Warming of 1.5° C <[https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15\\_Chapter3\\_Low\\_Res.pdf](https://www.ipcc.ch/site/assets/uploads/sites/2/2019/02/SR15_Chapter3_Low_Res.pdf)>

<sup>4</sup> [https://business.bofa.com/content/dam/boamimages/documents/articles/ID21\\_1543/Net\\_Zero\\_Redacted\\_Note\\_Updated\\_Final.pdf](https://business.bofa.com/content/dam/boamimages/documents/articles/ID21_1543/Net_Zero_Redacted_Note_Updated_Final.pdf); Source: International Energy Agency (2021), Net Zero by 2050.

<sup>5</sup> "Net Zero" is the point at which human-caused greenhouse gas (GHG) emissions going into the atmosphere have been reduced as much as possible and remaining GHG emissions are balanced by carbon removal out of the atmosphere. Achieving Net Zero by 2050 on a global scale is a fundamental component of limiting temperature rise to 1.5° C above pre-industrial levels.

# Our Progress

## UPDATES AND ACTIONS SINCE 2020

### Governance

- Established a new Enterprise Climate Program, including an Executive Steering Council on which two of our Vice Chairs, our Chief Risk Officer, our head of Enterprise Credit and others serve
- Established a Global Climate Risk Team that reports to our Global Head of Climate Risk
- Created a Global Sustainable Finance Group, reporting to our Global Sustainable Finance Executive, to engage our eight LOBs to finance the environmental transition and inclusive social development in alignment with the United Nations Sustainable Development Goals (UN SDGs)
- Established an ESG Disclosure Committee

### Strategy

- Committed to achieving [Net Zero](#) GHG emissions in our financing activities, operations and supply chain before 2050 (Net Zero Goal)
- Became a [founding member](#) of the Net-Zero Banking Alliance (NZBA) and Glasgow Financial Alliance for Net Zero (GFANZ)
- Announced 2030 GHG emissions targets for [operations](#), [supply chain](#) and [financing activity](#) in our auto manufacturing, energy and power generation portfolios (2030 Financing Activity Targets)
- Announced a goal of mobilizing and deploying \$1.5 trillion in Sustainable Finance by 2030, of which \$1 trillion is dedicated to supporting the transition toward a sustainable, low-carbon economy
- Announced an ESG-themed Issuance Framework to further enhance our issuances of green, social and sustainability bonds and other ESG securities

### Risk Management

- Enhanced the management of climate-related risks across regions and LOBs, including updating our enterprise Risk Framework and Risk Appetite Statement (RAS)<sup>6</sup>, launching a Center of Excellence to assess borrower climate risks and measuring climate-related risks via enterprise-wide scenario analysis exercises
- Assessed over 20 sources of climate risk data and established a climate risk data environment to enhance measurement and monitoring of climate risks across our portfolio

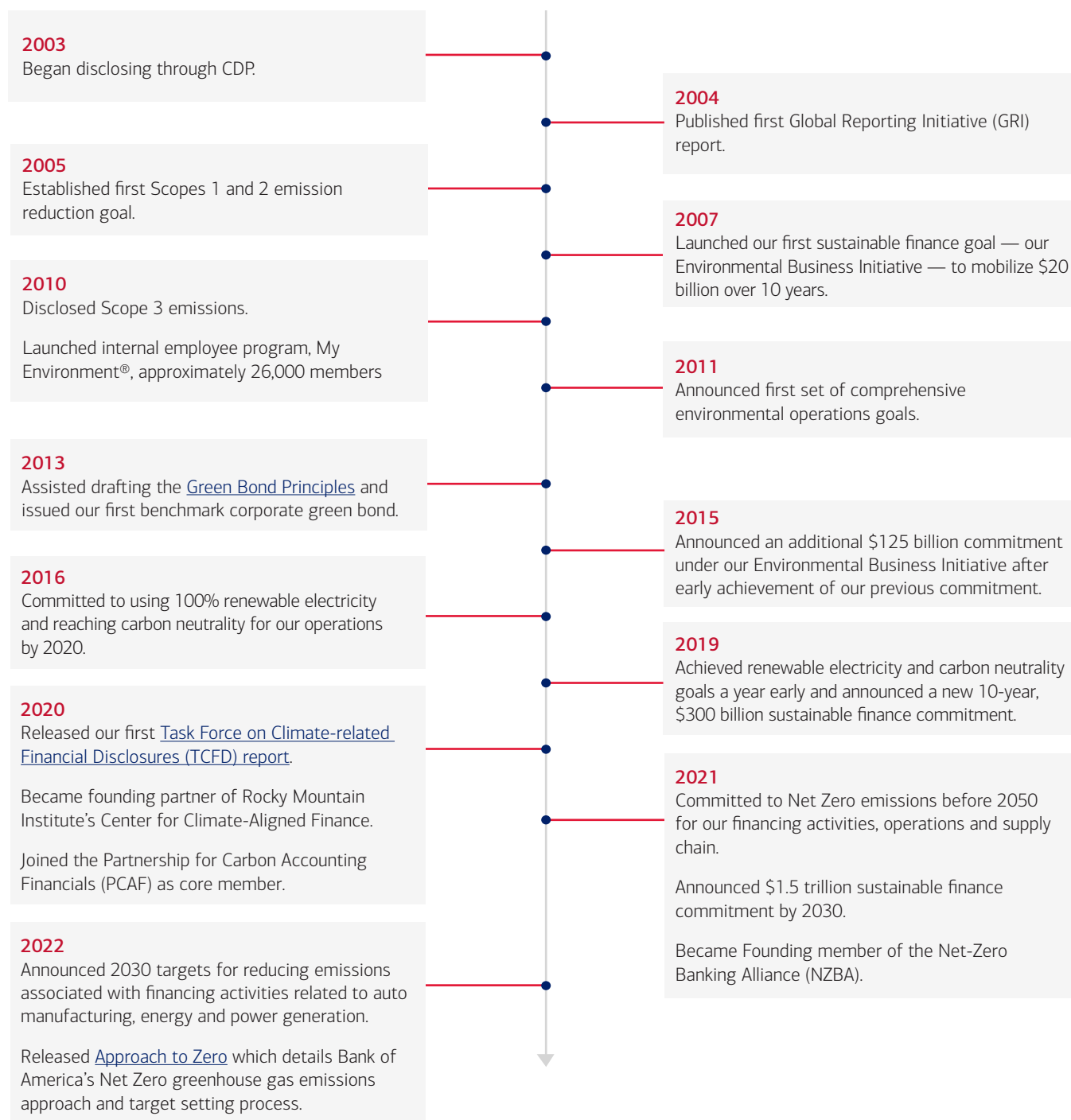
### Metrics and Targets

- Disclosed financed emissions and emissions intensity baselines for auto manufacturing, energy and power generation portfolios in this document
- Disclosed progress toward our \$1.5 trillion by 2030 Sustainable Finance goal by LOB
- Formalized our commitment to the development and utilization of Sustainable Aviation Fuel (SAF) and announced a 2030 SAF Goal that includes multi-year partnerships with SkyNRG and American Airlines

<sup>6</sup> The Company's Risk Appetite Statement (RAS) defines and communicates the amount of capital, earnings or liquidity we are willing to put at risk to achieve our strategic objectives and business plans, consistent with applicable regulatory requirements. The RAS includes both qualitative components and quantitative limits that are reviewed and approved by the Board of Directors at least annually. Qualitative components provide the philosophical underpinnings that guide the Company's businesses and risk leaders as they manage risk on a day-to-day basis consistent with our tenets of Responsible Growth and based on our risk appetite principles as defined in the Risk Framework.

Our actions over the past two years build on decades of work to address climate risks and opportunities dating back to our first GHG emissions disclosures to CDP (formerly Carbon Disclosure Project, of which we were a founder) in 2003. We continue to evolve and cultivate expertise, and we are committed to apply the lessons we learn toward further advancements that will guide not only our own strategy, but also those of our clients as we work toward Net Zero on the global scale.

Bank of America's commitment to Net Zero emissions builds on 20 years of climate leadership. Since 2003, Bank of America has been a leader in environmental reporting, reducing operational impacts and scaling climate finance.



In this document, we outline how we are working to realize our enterprise climate strategy. This includes how climate change is governed within the Company, the goals and priorities we set, actions taken and resources allocated to achieve these goals, our exposure to and management of climate-related risks, and the metrics and targets we track to monitor progress. We have used the TCFD framework as a foundation to articulate how Bank of America is using its financial and intellectual capital to help accelerate the transition to a more sustainable global economy.



## Highlighted Progress

We enhanced the oversight of climate-related opportunities and risks since our 2020 TCFD Report, and it continues to evolve with our environmental goals. Since April 2020, we:

- Established an Enterprise Climate Steering Council on which two of our Vice Chairs, Chief Risk Officer, head of Enterprise Credit and others serve
- Appointed a Global Climate Risk Executive who reports to our Chief Risk Officer and created a Global Climate Risk Group
- Appointed a Sustainable Finance Executive and established the Global Sustainable Finance Group to work across all eight LOBs to accelerate the mobilization and deployment of capital that is aligned with the 17 UN SDGs
- Established an ESG Disclosure Committee and various working groups, councils and routines to drive and track progress

## Board of Directors Oversight

The Company's Board of Directors (Board) sets the tone at the top, providing active and independent oversight of management and of the development and execution of our overall climate-related strategy. Our independent directors are seasoned leaders who bring deep and diverse experience from a range of industries and backgrounds. Their perspectives, experiences and expertise help inform and guide how we deliver long-term, sustainable value for our shareholders and share success with our communities.

The Board establishes our risk appetite by approving the Company's Risk Appetite Statement (RAS) and monitoring ongoing performance against the risk appetite. Climate risk is identified as a risk spanning all seven key risk types for which we maintain qualitative components in the RAS.

Our Board actively oversees our drive for Responsible Growth through comprehensive governance and oversight practices. The full Board oversees all ESG and related matters, including climate strategy. The Board and its committees engage with management, including our management-level Global ESG Committee (ESG Committee) and Management Risk Committee (MRC), on climate-related activities, climate risks and opportunities, our sustainable finance initiatives, our [Approach to Zero](#) strategy<sup>7</sup> and other ESG matters. Key topics covered with the Board and/or its committees in the past two years include climate-related oversight requirements, regulatory landscape, progress of the Enterprise Climate Risk program, as well as how the Company has been engaging its internal teams, suppliers and clients on the transition to Net Zero in our operations, supply chain and financing activities.

In particular, given its importance, climate risk is a regular topic of Board and Board committee discussion. The Board, through its Audit Committee, reviews the Company's enterprise climate risk disclosures in our financial reports filed with the U.S. Securities and Exchange Commission (SEC). In addition, the Board, through its Enterprise Risk Committee (ERC), receive quarterly risk reporting that addresses and provides updates on key and emerging risks, including climate risk.

## Management Oversight

The MRC, co-chaired by our Chief Executive Officer (CEO) and Chief Risk Officer, is a management-level committee responsible for management oversight of key risks facing the Company, including climate risk, and reports to the ERC, a Board-level committee. The MRC is supported by subcommittees organized by risk type (e.g., credit, market, operational). Each risk type considers the implication of climate-related risks.

<sup>7</sup> See <https://about.bankofamerica.com/en/making-an-impact/our-net-zero-strategy-and-targets-to-reduce-emissions> for [Approach to Zero](#), which outlines details on our Net Zero strategy.



The ESG Committee, a management-level committee composed of senior leaders across every major LOB and support function, is responsible for overseeing the Company's strategy and management of ESG activities and practices. The ESG Committee is accountable to the CEO and reports to the Corporate Governance, ESG, and Sustainability Committee of the Board. The ESG Committee provides overall leadership of our sustainable finance efforts across all eight LOBs and our progress to achieve our Net Zero Goal. On matters of environmental and social risk, the ESG Committee reports to the MRC, which in turn reports to the ERC.

The Company established an ESG Disclosure Committee, a subcommittee of the ESG Committee, responsible for reviewing and providing formal oversight of the Company's climate and ESG-related public disclosures.

As part of our Enterprise Climate Program, the Company launched a Climate Program Executive Steering Council (Climate SteerCo), which coordinates and integrates a number of capabilities we are working to build across the enterprise to drive execution of our Net Zero strategy. This Climate SteerCo is responsible for overseeing our execution of climate-related priorities.

## Enterprise Functional Teams

At Bank of America, our eight LOBs are building ESG teams with LOB-specific responsibilities and expertise. Those teams collaborate with three primary teams that work across the enterprise to execute against our Net Zero Goal, mobilize intellectual and financial capital to assist clients in their transition, and assess and manage both risks and opportunities. These groups report progress to senior management through the ESG Committee and MRC.

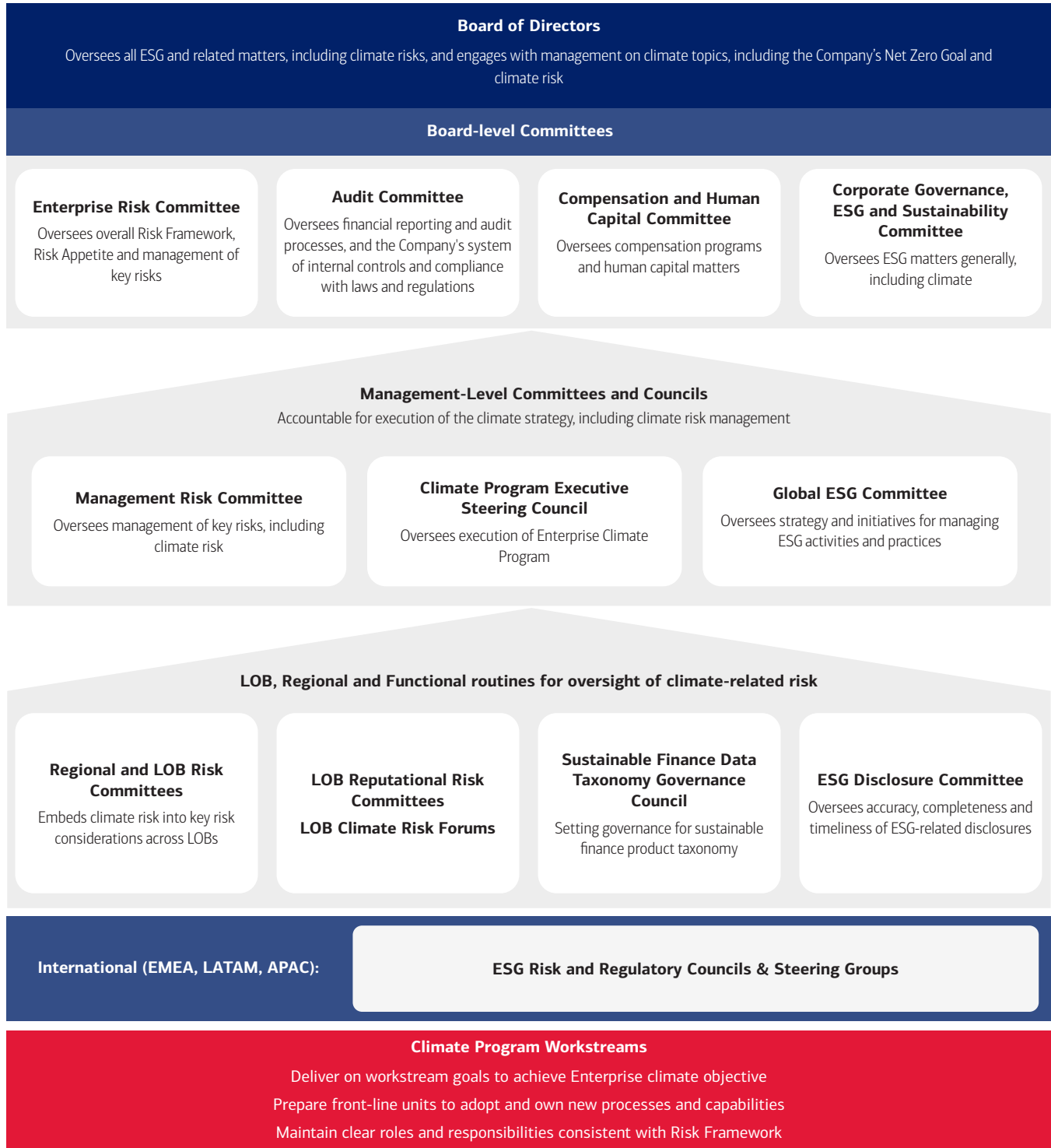
- The **Global Environmental Group** is an enterprise advisory function that oversees our environmental strategy, including our work to drive progress toward our Net Zero Goal and other environmental commitments. The group also catalyzes and supports the development of low-carbon business activity, the achievement of GHG emissions reductions and carbon neutrality across operations, the development of environmental policies and practices (e.g., Environmental and Social Risk Policy Framework [ESRPF]), and the monitoring and reporting of environmental activities. This team works across the enterprise to embed our ESG and Responsible Growth strategy into all aspects of our business and in support of the communities we serve.
- The **Global Sustainable Finance Group** is a front line unit (FLU) that works with our Management Team and partners across our eight LOBs to establish Bank of America's firm-wide sustainable finance strategy, set Bank of America's capital mobilization and deployment goals (e.g. Bank of America's \$1.5 trillion by 2030 Sustainable Finance commitment), drive thought leadership across international alliances and task forces, expand existing sustainable finance activities across LOBs, and innovate across emerging areas of climate and social finance. The Global Sustainable Finance Executive chairs the Global Sustainable Finance Cross-LOB Council (Council). The Council meets routinely and is responsible for implementing and accelerating the Company's sustainable finance strategy and initiatives across all eight LOBs and all four core roles the Company plays in Sustainable Finance, including: (i) balance sheet deployment – financing and investment, (ii) underwriting/distribution, (iii) advisory/structuring, and (iv) processing, servicing and trading.
- **Global Climate Risk Management** is a second-line<sup>8</sup> function within GRM responsible for establishing a strong risk management program that identifies, quantifies, monitors and manages climate risk and that advances the use of climate risk identification processes to enhance preparedness for a low-carbon, climate resilient future. The function is charged with providing review, oversight and effective challenge to ensure the enterprise is mobilized to address climate risks across its activities and providing a holistic, aggregated view of climate risk across the enterprise.

<sup>8</sup> We have clear ownership and accountability for managing risk across three lines of defense: front line units, Global Risk Management and Corporate Audit. The Company also has control functions outside of front line units and Global Risk Management (e.g., Legal and Global Human Resources) that provide guidance and subject matter expertise in support of managing risks facing the Company.

## Global Coverage

ESG risk and regulatory councils operate in each region and, where necessary, for some legal entities, to provide management oversight of activities related to the financial risks and opportunities from climate change and ESG-related regulatory requirements.

Various steering groups dedicated to ESG and climate around the world report to these councils and/or regional risk committees as appropriate. Additional working groups and forums offer coverage for Europe, Middle East, Africa (EMEA), Latin America (LATAM) and Asia Pacific (APAC).



## Performance and Remuneration

Our Board's Compensation and Human Capital Committee is committed to strong governance of our pay for performance compensation philosophy, which focuses on paying for performance over the long term, as well as on an annual basis. Performance considerations include both financial and non-financial measures – including the manner in which results are achieved – for the Company, LOBs and the individual. Performance goals are aligned to the four tenets of our Responsible Growth strategy, including progress toward growing in a sustainable manner, and are evaluated based on successfully driving progress toward these goals. For example:

- As part of our Responsible Growth strategy, our Executive Management team's performance dashboards contain ESG metrics. As relevant, these executive performance dashboards include metrics focused on progress toward our \$1.5 trillion Sustainable Finance commitment and Net Zero Goal. These metrics are tracked and reported to our Board.
- LOB teams, such as Global Sustainable Finance, Renewable Energy Finance and ESG Advisory and Financing Solutions, focus directly on climate innovation and environment-related revenue streams and are evaluated based on management of these opportunities.
- The Chief Procurement Officer is responsible for the Company's responsible sourcing strategy and performance is evaluated on success in these areas. Global Procurement is tasked with engaging suppliers on the management of climate change, including the delivery of our climate-related supplier engagement targets.
- The Global Climate Risk team is responsible for embedding climate risk across our risk framework by advancing the use of climate risk factors to enhance preparedness for a low-carbon, climate resilient future and is evaluated based on these activities.
- Teams responsible for delivering operational GHG emissions reduction targets and reaching carbon neutrality include the Global Real Estate Services team, the Global Technology and Operations team, Consumer, Global Procurement, the Global Environmental Group. Team performance is evaluated based on successfully implementing activities and initiatives that support energy efficiency and manage and reduce GHG emissions.

## Stakeholder Engagement

We actively consult with independent third parties with diverse perspectives to help shape our climate strategy. We convene with shareholders, industry leaders, consumer advocates, community advisors, thought leaders and other stakeholders for their advice and guidance, and routinely engage with our stakeholders in assessments that identify and promote progress.

One way we do this is through our National Community Advisory Council (NCAC), which is a diverse group of senior leaders from social justice, consumer advocacy, community development, environmental and policy organizations that meets several times each year to provide a range of external perspectives on our business policies, practices and products. Our CEO and senior management join these meetings regularly and our independent Board members have had the opportunity to meet and hear directly from our NCAC advisors.

As we continue our work to address climate change and the demands on Earth's natural resources, our NCAC advisors have been instrumental in providing counsel, including how we deliver on and work to achieve our Net Zero Goal. For additional information about the NCAC, see our 2022 Proxy Statement available on our investor relations website.



Our three-pronged climate strategy is part of our overall focus on Responsible Growth and centers on extensive engagement and partnership with internal and external parties.



## Minimize BAC's impact on the environment: Net Zero before 2050

- Net Zero in operations, supply chain and financing activities before 2050 (i.e., Scopes 1, 2 and 3)
- Achieve 2030 targets to reduce financed emissions and environmental impacts across our supply chain
- Carbon neutral in our operations today (i.e., Scopes 1 and 2)



## Inspiring and enabling clients to achieve Net Zero 2050

- Client engagement (e.g imperative, industry perspectives and competitiveness); deliver traditional product solutions and develop new climate-transition specific solutions
- Initiate coverage of new industries and companies
- \$1.0 trillion Sustainable Finance goals and other initiatives



## Assess and manage climate-related risks

- A rigorous risk management program that advances the use of climate risk factors across risk types to evaluate risk to climate change

### Highlights:

Since our 2020 TCFD Report, we have set ambitious internal and external goals aligned with our climate strategy including:

- Committing to our Net Zero Goal before 2050 and joining NZBA
- Announcing our 2030 Financing Activity Targets
- Joining the Partnership for Carbon Accounting Financials (PCAF) and committing to disclose our financed emissions
- Supporting clients in their just transition<sup>9</sup> to a low-carbon economy through our commitment to mobilize and deploy \$1 trillion, part of our \$1.5 trillion by 2030 Sustainable Finance goal, under which we mobilized and deployed approximately \$250 billion in 2021, including more than \$155 billion for climate and environmental transition
- Announcing an ESG-themed Issuance Framework (the "Framework") to further enhance our issuances of green, social and sustainability bonds and other ESG securities

<sup>9</sup> A just transition means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. This involves maximizing the social and economic opportunities of climate action while minimizing and carefully managing any challenges. Source: [https://www.ihrb.org/explainers/what-is-just-transition?gclid=CjwKCAjw7cGUBhA9EiwArBAvolEq1Co2qnxALf4IVxLcC\\_rDwwi6Kuy0FCYQ2ax4UElty7IC7GYKPhoCsFEQAvD\\_BwE](https://www.ihrb.org/explainers/what-is-just-transition?gclid=CjwKCAjw7cGUBhA9EiwArBAvolEq1Co2qnxALf4IVxLcC_rDwwi6Kuy0FCYQ2ax4UElty7IC7GYKPhoCsFEQAvD_BwE)



## Minimizing BAC's impact on the environment: Net Zero before 2050

As a large global company, we understand the impact our business has on the environment and the potential we have to help influence and drive positive change. Our scale lets us take measurable action to reduce our impacts by operating with greater efficiency, implementing and supporting the development of new technologies and influencing our clients and supply chain. Our employees also play a key role in reducing our environmental impact. We empower them to make a difference through our My Environment® program, which engages and connects Bank of America teammates across the globe to learn from experts, share knowledge and volunteer in their communities.

In February 2021, we announced our Net Zero Goal and set out 2030 emissions targets for our operations and supply chain. We followed that up in April 2022 with our 2030 Financing Activity Targets. In line with our commitment to NZBA, we plan to set financing activity emissions reduction targets for other key high-emitting sectors over the next 18 months, by April 2024. Further details on our Net Zero strategy and target setting methodology can be found in our [Approach to Zero](#).

### 2030 Targets<sup>10</sup>

Operations	Supply Chain	Financing Activity
<ul style="list-style-type: none"> <li>Maintain carbon neutrality (Scope 1 and 2) and 100% zero carbon electricity</li> <li>Reduce GHG emissions by 75% by 2030 (Scope 1 and 2, location-based) from 2010 baseline</li> <li>Reduce energy use by 55% from 2010 baseline</li> <li>Reduce potable water use by 55% from 2010 baseline</li> <li>Achieve LEED® certification (or comparable) for 40% of building space</li> <li>Responsibly manage waste to reduce amount sent to landfill</li> <li>Divert 75% of construction and demolition waste from landfill</li> <li>Dispose 100% of electronic waste using certified responsible vendors</li> </ul>	<ul style="list-style-type: none"> <li>Ensure 70% of global vendors, by spend, set GHG emissions reduction or renewable energy targets</li> <li>Assess 90% of global vendors, by spend, for Environmental, Social, Governance (ESG) risks as outlined by our Vendor Code of Conduct</li> <li>Continue to reduce paper use and purchase 100% of paper from certified sources</li> <li>Utilize Sustainable Aviation Fuel (SAF) for at least 20% of the company's total annual corporate and commercial jet fuel usage</li> </ul>	<p><b>Auto Manufacturing</b></p> <ul style="list-style-type: none"> <li>Reduce intensity 44% by 2030 (gCO<sub>2</sub>e/km Scope 1, 2 &amp; 3 end use) from 2019 baseline</li> </ul> <p><b>Energy</b></p> <ul style="list-style-type: none"> <li>Reduce intensity 42% by 2030 (gCO<sub>2</sub>e/MJ Scope 1-2) from 2019 baseline</li> <li>Reduce intensity 29% by 2030 (gCO<sub>2</sub>/MJ Scope 3 end use) from 2019 baseline</li> </ul> <p><b>Power Generation</b></p> <ul style="list-style-type: none"> <li>Reduce intensity 70% by 2030 (kgCO<sub>2</sub>/MWh Scope 1) from 2019 baseline</li> </ul>

### Operations and Supply Chain

We have been reporting Scope 1 and 2 GHG emissions since 2008 and were the first U.S. bank to announce a Scope 1 and 2 GHG emissions reduction goal with Environmental Protection Agency (EPA) Climate Leaders.<sup>11</sup> We began publicly disclosing our material categories of Scope 3 GHG emissions in 2010, except for financed emissions, and over the past decade have set targets to manage and reduce the environmental impacts of our activity across all GHG emissions scopes.

Achieving our operations and supply chain goals requires deliberate efforts to limit the emissions associated with a range of different activities, including, but not limited to, the facilities we own and operate, purchase of goods and services from our suppliers, as well as our employees' travel and commute.

We employ responsible natural resource management in our operations and supply chain, including efforts to improve energy efficiency, use and expand renewable energy sources, reduce waste and conserve water use (for additional information, see the Metrics and Targets section of this document).

Since 2010, we have reduced our location-based GHGs by 63%; and in 2019, we achieved carbon neutrality for our operations, one year ahead of our goal. To reach and maintain carbon neutrality for Scope 1 and 2 emissions, we reduce our location-based emissions, purchase 100% of electricity from renewable sources and acquire a small number of carbon offsets for our unavoidable emissions.<sup>12</sup>

In 2021, we procured all of our electricity from renewable sources, with more than 10% of our renewable electricity procured through power purchase agreements (PPAs)<sup>13</sup>. PPAs allow power generators to fund and build projects by providing revenue certainty for new assets. Renewable PPAs also ensure a reduced carbon footprint for us via a secure and predictable supply of green energy. After entering a significant PPA in 2022, we expect the percentage of renewable electricity purchased through PPAs to grow to nearly 30% by 2025. We are also completing the installation of solar panels on nearly 80 buildings across our occupied portfolio.

<sup>10</sup> kgCO<sub>2</sub>e and gCO<sub>2</sub>e stands for kilograms and grams of carbon dioxide equivalent, km stands for kilometer, MJ stands for megajoule, MWh stands for megawatt hours.

<sup>11</sup> GHG emissions scopes as defined per the [Greenhouse Gas Protocol](#). EPA Climate Leaders launched in 2002 as a voluntary program that worked with companies to measure GHG emissions and set aggressive long-term emissions reduction goals.

<sup>12</sup> We disclose information about our retired carbon offsets and carbon offset projects annually (see pgs. 17-19 of our 2021 ESG Performance Data Summary). Our amount of purchased carbon offsets for Scope 1 and 2 emissions has been decreasing YOY.

<sup>13</sup> A power purchase agreement (PPA) is a contract between two parties, a party that generates electricity (the seller) and a party that is looking to purchase electricity (the buyer).

In addition to achieving Net Zero in our operations, we are also working to reach Net Zero with respect to indirect emissions generated across our entire supply chain. In 2016, we set our first-ever public goals to address GHG emissions in our supply chain – those goals were focused on supplier engagement. In 2021, we set our second set of supplier engagement goals, to be achieved by 2030, shifting our focus from supplier engagement to driving specific supplier commitments. Our goal is to have 70% of global suppliers, by spend, set GHG emissions reduction or renewable energy targets.

We continue to utilize CDP as part of our extensive supplier engagement process. CDP is an international nonprofit that drives companies and governments to reduce their greenhouse gas emissions, safeguard water resources and protect forests. As a founding member of the CDP supply chain program, we have invited suppliers to respond to the CDP supply chain questionnaire since 2009. The annual CDP supply chain questionnaire helps us understand climate change impacts on our suppliers' businesses and associated risks related to our global supply chain. In 2021, we requested disclosures from 210 suppliers through the CDP supply chain program and achieved a response rate of 91%. Additionally, 88% of the responding suppliers reported GHG emissions and 73% of the responding suppliers (approximately 68% of the 210) are making additional commitments by setting GHG emissions reduction goals or renewable energy procurement goals. Each year, we provide individualized feedback to each supplier regarding its level of transparency and performance. This has facilitated an ongoing dialogue with our suppliers, which promotes collaboration and drives positive environmental change.

As of December 31, 2021, we had 254 charging stations installed at Bank of America locations for employee use. In 2019, we teamed up with Electrify America to begin installing EV charging stations at select financial center locations across the U.S. Additionally, through our global Electric Vehicle Program, we offer a credit to employees who purchase or lease a new all-electric passenger vehicle, provided certain eligibility criteria are met (beginning July 2022).

We promote digital access to client services and paperless transactions to help reduce the need to drive to a financial center. More than 76% of our Consumer banking accounts receive paperless monthly statements. We also offer electronic billing and payment options and digital access to products such as mortgage, auto, credit cards and Home Equity Lines of Credit.

These actions build on a strong track record of setting and achieving previous GHG emissions reduction goals. More detail on our GHG emissions reduction progress and our suite of operational goals can be found in the Metrics and Targets section, as well as our ESG Performance Data Summary and our CDP Climate Change Questionnaire response, both of which are located on our [ESG reports center](#).

## **Financing Activity**

The GHG emissions associated with the financing we provide clients is the largest portion of our GHG emissions and requires the most effort to transform. As detailed in our [Approach to Zero](#), reducing GHG emissions associated with our financing activity to Net Zero involves key steps, including:

- Analyzing data to develop decision-useful metrics to drive progress
- Aligning our strategy to scientific decarbonization pathways by setting appropriate milestone targets to reach Net Zero before 2050
- Advocating for consistent industry and global standards to drive comparable commitments and disclosure

### **Analyzing data to develop decision-useful metrics to drive progress**

Our process for measuring and disclosing the GHG emissions associated with our financing activity involves combining carbon accounting with financial accounting to quantify the portion of GHG emissions generated by our clients that are attributable to us based on our financing to them, known as financed emissions.

When we issued our 2020 TCFD Report, there was not a widely agreed upon global methodology for financial institutions to measure and disclose financed emissions. In July 2020, we became a core member of PCAF to work with a global partnership of financial institutions to develop and implement a harmonized approach to assess and disclose the GHG emissions associated with loans and investments. PCAF released the Global GHG Accounting and Reporting Standard for Financial Institutions in November 2020, providing an industry standard to quantify the GHG emissions associated with financing activities for many asset classes. Our approach to calculating GHG emissions for each commercial credit loan is aligned with the PCAF calculation approach for Business Loans, further detailed in Appendix 2, Financed Emissions and Sector Intensity Calculation Methodology:

### Private Companies:

$$\sum_C \frac{\text{Outstanding amount}_c}{\text{Total Equity} + \text{Debt}_c} \times \text{Client Emissions}_c$$

### Listed Companies:

$$\sum_C \frac{\text{Outstanding amount}_c}{\text{Enterprise Value Including Cash (EVIC)}^{14}_c} \times \text{Client Emissions}_c$$

Following the PCAF standard, Bank of America's Global Environmental Group worked with our LOBs and Global Risk Analytics (GRA<sup>15</sup>) teams to develop a process to measure our financed emissions. Our initial effort focused on financed emissions from our commercial credit loan activities in the auto manufacturing, energy and power generation sectors. We chose those sectors first because transportation, energy, electricity and heat production are among the primary sources of global GHG emissions.<sup>16</sup>

The implementation of the PCAF standard required significant allocation of analytics, data, technology and modeling resources.

The initial step in calculating financed emissions is to gather data on our clients' emissions. However, clients vary widely in their disclosure of emissions, and even when reported, data is often not verified (i.e., audited). Additionally, there is no one data source or even group of data sources that adequately and consistently cover our needs for client emissions and production information across the auto manufacturing, energy and power generation sectors. Accordingly, we obtained historic reported emissions and production data on some of our clients from their public reports and leveraged certain third-party suppliers, such as S&P Global TruCost (S&P), MSCI, ERM and CDP, to cover most of our data needs. Where client emissions were not available, we estimated emissions based on the PCAF standard, primarily using emissions factors from S&P.

From a data and technology perspective, this required the integration of multiple internal systems housing exposure and client financial statement details with various pieces of external data, including client emissions and production information, as well as emissions estimation factors, to allow us to calculate financed emissions.

For target-setting purposes we used the production information to calculate the physical emissions intensities of our clients. Further, for portfolio and risk analysis we used the portfolio loan information to calculate the economic intensity of each sector portfolio. For additional information about calculation details, see below.

Our modelling team developed a model to calculate the emissions, financed emissions, and physical and economic emissions intensities across the relevant scopes for each sector. Our calculations are largely based on client-reported emissions and client-reported production information. Where clients are not consistently reporting emissions, we use third-party supplier estimated emissions or conduct estimates internally using other client-reported data and emissions factors.

The complexity of this process only served to highlight the critical need for consistent, verified public reporting of emissions and other climate-related data. For additional information, see Public Policy Advocacy.

<sup>14</sup> EVIC is defined in the PCAF standard as the sum of the market capitalization of ordinary shares at fiscal year end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.

<sup>15</sup> Global Risk Analytics (GRA) is a sub-group within GRM. GRA is responsible for developing a consistent and coherent set of models and analytical tools for effective risk and capital measurement, management and reporting across Bank of America. In addition to model development, GRA conducts model implementation, data management, model execution and analysis, forecast administration, and model performance monitoring. The team drives innovation, process improvement and automation across all of these activities.

<sup>16</sup> <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions>

To evaluate the quality of the data, PCAF provides a scoring mechanism for emissions calculations. Under this system, the use of verified client-reported emissions achieves a data quality score of 1, unverified emissions achieve a score of 2\*, and estimated emissions range from a score of 3 to 5 based on the information used to conduct estimations. Estimates based on client-reported production information achieve a score of 3, with those based on client-reported revenue receiving a score of 4. A score of 5 occurs when we conduct the estimations without any client-reported information. The table below illustrates the percentage of reported and estimated emissions for each sector across relevant scopes with our associated data quality scores.

		Data Quality Scores (1-5)		
		Client Reported (Verified/Unverified)* 1-2	Physical Production or Revenue Based Estimates 3-4	Asset Intensity Factor Estimates 5
		% based on Utilized exposure for each year		
Scope 1 Auto Manufacturing	2019	71.76%	28.24%	0.00%
	2020	78.88%	21.12%	0.00%
Scope 2 Auto Manufacturing	2019	71.76%	28.24%	0.00%
	2020	65.86%	34.14%	0.00%
Scope 3 Auto Manufacturing	2019	65.10%	17.73%	17.17%
	2020	76.01%	17.42%	6.57%
Scope 1 Energy	2019	56.35%	27.97%	15.68%
	2020	58.66%	27.95%	13.39%
Scope 2 Energy	2019	51.00%	33.30%	15.70%
	2020	55.84%	30.77%	13.39%
Scope 3 Energy	2019	0.14%	78.82%	21.04%
	2020	0.00%	84.40%	15.60%
Scope 1 Power Generation	2019	56.68%	34.58%	8.74%
	2020	47.26%	38.40%	14.34%

\*Per PCAF, a Data Quality Score of 2 is also given if emissions are calculated using the client's energy consumption details and emission factors.

By analyzing our clients' emissions and measuring our financed emissions, we were able to determine the most relevant and material emissions for each sector and use the analysis to inform the setting of GHG emissions reduction targets.

While our financed emissions calculations per the PCAF standard are based on utilized commercial credit exposure, we set our 2030 Financing Activity Targets using committed commercial credit exposure<sup>17</sup>. We chose to use committed commercial credit exposure for target setting as we believe it better represents the support we provide clients and avoids volatility associated with timing of clients' use of credit facilities.

## Inclusion of Capital Markets and Tax Equity

While not included in our initial baselines or targets, our financing activities with clients include advising on and underwriting transactions in the debt and equity capital markets, as well as tax equity investments.

We recognize that capital markets activity plays a crucial role in fueling economic activity and has the potential to provide necessary funding for climate transition. We are part of the PCAF Working Group to develop a methodology to measure and disclose the emissions associated with debt and equity capital markets and plan to include those emissions in our disclosures once the methodology is available. We also plan to include capital markets activity in our financing activity targets once the methodology is available.

In addition to our capital markets activity, we are also a significant provider of tax-equity financing for renewable projects. As we look to update our power generation targets in the future we will consider how best to include (or reflect) this financing.

<sup>17</sup> Utilized commercial credit exposure is the amount outstanding, drawn or issued under committed facilities. This includes loan and lease outstandings as well as other utilized exposure under other instruments as appropriate. Committed commercial exposure is the sum of utilized and any unused committed credit the borrower has available including any undrawn fronted credit.



## **Aligning our strategy to scientific decarbonization pathways by setting appropriate milestone targets to reach Net Zero before 2050**

Setting GHG emissions reduction targets on our financing activity involves evaluating decarbonization scenarios for each sector to determine the amount of emissions reductions required across relevant GHG emissions scopes to achieve Net Zero before 2050. We reviewed multiple scenarios to determine the GHG emissions reduction required for our 2030 Financing Activity Targets, including the Network for Greening the Financial System (NGFS) pathways, and two IEA scenarios: the Sustainable Development Scenario (SDS) Organization for Economic Cooperation and Development (OECD) pathway and the IEA Net Zero Emissions 2050 (NZE2050) global pathway.

The NGFS is a network of 66 central banks and financial supervisors and 13 observers that aim to accelerate the scaling up of green finance and development recommendations for central banks' role in addressing climate change. The NGFS climate scenarios were produced with an academic consortium consisting of the Potsdam Institute for Climate Impact Research, International Institute for Applied Systems Analysis, University of Maryland, Climate Analytics and the Swiss Federal Institute of Technology in Zurich and were developed to provide a common starting point for analyzing climate risks to the economy and financial system. Primarily developed for use by central banks and supervisors, the scenarios evaluate an "Orderly" and "Disorderly" transition as well as a "Hot House" world. We specifically evaluated the Orderly scenario, which provides details on what is needed to limit the global temperature rise to below 2°C by 2050 while also limiting climate-related risks. However, we ultimately chose to align our 2030 Financing Activity Targets to the IEA NZE2050 scenario.

The IEA was created in 1974 to help coordinate a collective response to major disruptions in the supply of oil. While oil security remains a key aspect of its work, the IEA has evolved and expanded since its foundation to take an all-fuels, all-technology approach, recommending policies that enhance the reliability, affordability and sustainability of energy across its 30 member countries, eight association countries and beyond. It examines the full spectrum of issues, including renewables, oil, gas and coal supply and demand, energy efficiency, clean energy technologies, electricity systems and markets, access to energy, demand-side management and more. The IEA NZE2050 scenario released in 2021 was the world's first comprehensive study of how to transition to a Net Zero energy system by 2050, limiting the global temperature rise to 1.5° C by 2050, while ensuring stable and affordable energy supplies, providing universal energy access and enabling robust economic growth.

We chose to use the IEA NZE2050 scenario released in 2021 for our 2030 Financing Activity Targets as it is the only scenario that aligns with a 1.5° pathway to Net Zero before 2050 and outlines the percentage of emissions reduction needed from 2019 to 2030 for various sectors, sub-sectors and target types, providing the necessary detail to develop appropriate and relevant targets for the three sectors using 2019 as the baseline. We intend to continue using the IEA NZE2050 global scenario to inform our strategy with clients in these sectors.

Sector	Pathway	Assumptions
Auto Manufacturing	IEA Global NZE2050 (1.5)	<ul style="list-style-type: none"> <li>By 2035 there are no new ICE car sales</li> <li>60% global vehicle sales are EV by 2030</li> <li>50% pathway probability</li> </ul>
Energy	IEA Global NZE2050 (1.5)	<ul style="list-style-type: none"> <li>75% reduction in oil demand in 2050 from 2020 levels</li> <li>55% reduction in natural gas demand in 2050 from 2020 levels</li> <li>7.6 gigaton of CO<sub>2</sub> captured annually by 2050</li> <li>No new oil and gas fields are needed beyond what is identified as of 2021</li> <li>50% pathway probability</li> </ul>
Power Generation	IEA Global NZE2050 (1.5)	<ul style="list-style-type: none"> <li>By 2050, renewable sources make up 76% of total power generation</li> <li>Unabated coal ends by 2040</li> <li>By 2050, 73% of natural gas generation is equipped with CCUS</li> <li>103% reduction in CO<sub>2</sub> emissions in 2050 from 2020 levels</li> <li>50% pathway probability</li> </ul>

Another key element of target setting is evaluating the type of target to set in order to support and track emissions reductions by our clients. In April 2021 we became a founding member of NZBA, one of the financial industry alliances under GFANZ, which brings together all components of the financial industry under one umbrella to drive collaboration, accountability and progress. NZBA, convened by the United Nations Environment Programme Finance Initiative (UNEP FI), unites the world's leading banks to support their efforts to align their financing and investment portfolios with Net Zero emissions by 2050. The Company's Global Environmental executive serves on the steering group for NZBA which develops guidelines and requirements for credible Net Zero commitments and interim targets for banking members.

By becoming a member of NZBA we committed to the following, which aligns with our Net Zero Goal and strategy:

- Transitioning our lending portfolios to align with pathways to Net Zero by 2050;
- Setting the first round of 2030 GHG emissions reduction targets for key sectors within 18 months of the establishment of NZBA, and setting targets for all or a substantial majority of the carbon-intensive sectors<sup>18</sup> by April 2024. These 2030 Financing Activity Targets are expected to be developed using the UNEP FI Guidelines for Climate Target Setting for Banks (NZBA UNEP FI Guidelines);
  - Setting five-year interim goals from 2030 through 2050; and
  - Annually publishing absolute emissions and emissions intensity in line with best practices and, within a year of targets being set, disclose our progress and transition strategy with proposed actions and climate-related sectoral approaches.

The NZBA UNEP FI guidelines allow for either intensity (emissions per unit of production) or absolute (total quantity of emissions) targets. Based on our review of various target types, we decided to set weighted-average physical unit emissions intensity (emissions per unit of production) targets.

Our rationale for choosing physical emissions intensity rather than absolute emissions for our 2030 Financing Activity Targets involved several considerations, all related to our business objectives. As we set targets for other sectors, we will evaluate each sector on a case-by-case basis, depending on the specific facts and circumstances, to determine the best target metric.

### Rationale for physical emissions intensity vs. absolute emissions for 2030 Financing Activity Targets

Business Objective	Considerations	Outcome
Reduce our financed emissions by assisting clients in reducing their emissions in alignment with our Net Zero objectives	EVIC volatility on absolute financed emissions calculations is tied to market value which fluctuates and could cause our portion of a client's emissions to decline or increase without our financing activity or the client's emissions changing.	While we are very focused on absolute financed emissions, on which our Net Zero Goal is based and which we report here, year-over-year EVIC volatility made an absolute emissions metric more challenging for shorter-term tracking and 2030 targets.  We will continue to work with PCAF to address these challenges related to EVIC volatility.
Engage clients in high-emitting sectors to transition by disclosing emissions and setting emissions reduction targets; track client progress	The physical unit intensity metric effectively represents the transition to cleaner automobiles, energy, and power generation and is widely used by clients in these sectors to track progress. Additionally, emissions intensity metrics are one of the metrics that third parties such as the IEA, Science Based Targets Initiative, and Transition Pathway Initiative use to track progress of companies in these sectors and determine which companies are aligned to Net Zero	Choosing the emissions intensity metric for 2030 Financing Activity Targets provides us with a decision useful metric to monitor client progress and compare peers within a sector as well as track our progress as it compares to the decarbonization pathways outlined by the IEA for these sectors

<sup>18</sup> Carbon intensive sectors include: agriculture; aluminum; cement; coal; commercial and residential real estate; iron and steel; oil and gas; power generation; and transport.

Our weighted-average physical unit emissions intensity metric is derived by taking the client emissions divided by the client physical unit activity for the year to develop a client-level emissions intensity per unit of production. That intensity is then multiplied by our committed exposure to the client divided by our total exposure to the sector. These individual intensities are then summed to create a portfolio-wide intensity for the sector.

$$\text{Weighted Average Physical Unit Intensity} = \sum \left( \frac{\text{Client Emissions}}{\text{Client Production}} \times \frac{\text{Client Financing}}{\text{Total Sector Financing}} \right)$$

Our target-setting boundaries are based on our goal of capturing the most relevant and material GHG emissions to drive the greatest impact. Key considerations for each sector are discussed below. For additional information, see Appendix 2, Financed Emissions and Sector Intensity Calculation Methodology.

## Auto Manufacturing

Light duty passenger car and truck manufacturers are included in the boundary of our auto manufacturing target. The target was derived from the NZE2050 emissions pathway for road vehicles and covers Scopes 1 and 2 and end use Scope 3 carbon GHG emissions of our clients. These end use GHG emissions are the most relevant and material for this sector and are often referred to as tank-to-wheel (or tailpipe) emissions. The emissions intensity calculation includes the lifetime emissions of each new vehicle sold within the year. We used 200,000 kilometers (km) as the average lifetime of a vehicle as the IEA has used that figure in their analyses, several U.S. and International companies use that figure in their emissions analyses, and literature reviews suggest 150,000 km is now widely considered too low of an assumption given vehicles are being driven more and used longer than even a decade ago.

## Energy

Energy targets include upstream producers, refiners and integrated companies within the oil and gas industry. We chose those sub-sectors based on relevance and data availability as they represent the majority of GHG emissions within the sector and are the only sub-sectors that report oil and gas production details for use in estimating Scope 3 end use GHG emissions and calculating the physical intensity metric. We set one intensity target for Scopes 1 and 2 and a second intensity target for Scope 3 in order to best apply the different NZE2050 pathways for the sector and to reflect clients' progress in reducing both operational emissions and end use emissions. To arrive at a separate target for Scopes 1 and 2 we applied the IEA NZE2050 reduction pathways for methane, flaring and other carbon emissions. For Scope 3 we applied the intensity reduction pathway for the sector end use emissions. Coal mining is not included in our GHG emissions reduction targets as it is covered by our policy to phase out all financing of companies deriving  $\geq 25\%$  of their revenue from thermal coal mining, unless the company has a public commitment to align its business (across Scope 1, 2 and 3 emissions) with the goals of the Paris Climate Agreement and the transaction would be facilitating the diversification of the company's business away from thermal coal. We estimated Scope 3 end use GHG emissions using client-reported production information, as detailed in Appendix 2.

## Power Generation

The power generation target only includes the Scope 1 carbon emissions from clients that generate power, as these emissions are the most relevant and material for this sector. The Scope 1 physical unit intensity target reflects the expected increase in generation as the economy moves to electrification, encourages the transition to zero carbon electricity and directly aligns with the NZE2050 pathway.

## Carbon Offsets

For all sectors referenced above, we intend to apply client use of carbon offsets to our 2030 Financing Activity Targets as the data is available and as we have established an internal review and due diligence system. These offsets will be required to meet specific criteria, including certification by a credible body<sup>19</sup> adherence to the Core Carbon Principles developed by the Taskforce for Scaling the Voluntary Carbon Market and be used in combination with a science-aligned GHG emissions reduction commitment. We recognize this area is rapidly evolving and will continue to follow guidance from NZBA and other parties on the application of carbon offsets.

<sup>19</sup> Examples include, but may not be limited to, Verra's Verified Carbon Standard program, which requires a thorough assessment process to meet certification requirements.

## Achieving 2030 Targets and Future Efforts

As highlighted in our [Approach to Zero](#), we recognize that to achieve our 2030 targets we will need to work with our clients to assist them in achieving their own Net Zero goals. We will work with our clients to understand their commitments, transition plans and emissions projections. However, we will also need to modify a number of our internal processes and routines to incorporate emissions data into our decision making. We have begun the work of capturing client data and building tools to provide decision useful information to bankers and senior management. We acknowledge that refinement to our decision making processes will evolve over time as data quality and reporting improves. Near-term foundational steps focus on: (1) Processes & Routines, (2) Data, and (3) Reporting & Monitoring.

We will continue to enhance our systems to analyze more data and produce decision useful metrics to engage and support our clients, manage risk and strive to meet our 2030 Financing Activity Targets. To complement these 2030 Financing Activity Targets, we are also reviewing opportunities to enhance our financing policies to better work with clients to finance their transition. In alignment with NZBA UNEP FI guidelines, we plan to continue to set milestone targets for other key high-emitting sectors through 2024. As data continues to improve and the science evolves, we plan to re-evaluate our targets to ensure they remain relevant and in alignment with our Net Zero Goal and will continue to develop and adapt our governance for strategic decision making and execution.

## Inspiring and enabling clients to achieve Net Zero

To achieve our Net Zero objectives, our clients also will need to become aligned to Net Zero and we plan to be the adviser of choice to our clients in this transition. Net Zero is a global challenge and simply attempting – on a worldwide scale – to achieve Net Zero emissions in less than 30 years will have a transformative impact on the world economy. The transition requires a significant flow of capital to be put to work in an efficient and effective manner. As previously noted, the IEA estimates investments totaling \$150 trillion will be required over the next three decades to transition to a Net Zero economy. This translates to \$5 trillion of investment per year for 30 years – an increase of five to eight times current levels.

For our clients, achieving Net Zero will be challenging but Bank of America is well positioned to provide advice and expertise across industry sectors and deliver financial products to help clients achieve their goals. This is an immense opportunity to actively engage and partner with clients in areas where they need assistance, while providing us an opportunity to increase market share and grow responsibly.

Given client needs and our commitment to global Net Zero efforts, in 2021, Bank of America announced a goal of mobilizing and deploying \$1.5 trillion in Sustainable Finance capital by 2030 that is aligned with the 17 UN SDGs, of which \$1 trillion is dedicated to supporting the transition toward a low-carbon economy.

In support of this goal, we actively engage with clients across all industry sectors and provide a comprehensive suite of financial solutions that includes lending, capital raising, advisory, investment services, risk management and other financial solutions. In 2021, we mobilized and deployed approximately \$250 billion in Sustainable Finance activity toward this goal, of which more than \$155 billion was for climate and environmental transition. The two main pillars of our Sustainable Finance business focus are:







Our clients will need our advice and our expertise across industry sectors to assist them in navigating the climate transition. As such, we are undertaking an effort to educate and prepare relationship managers and bankers with Net Zero foundational training, so they can actively engage with clients on the topic and provide a comprehensive client experience on the path to Net Zero. Designated ESG Champions and Ambassadors have undertaken skill building to help drive this effort across our vast network of relationship managers and bankers in each of the markets and regions we serve. Our goal is to direct significant focus to the clients and industries that will be the hardest to decarbonize, representing the business imperative that Net Zero signifies for Bank of America and our [Approach to Zero](#) framework, which begins with *Assisting our clients*. By embedding our efforts across the Company and incorporating them into the governance structures mentioned previously we can help ensure that we are harmonized in our approach across all elements of our climate strategy.

Given our experience in reducing our own carbon footprint, achieving carbon neutrality, setting Net Zero targets and educating our bankers on the climate transition, we believe we are uniquely positioned to assist our corporate and municipal clients on their own carbon reduction targets. This includes:

- Sharing industry and competitive perspective to help clients understand the business imperative for setting a Net Zero strategy
- Encouraging clients to measure and disclose Scope 1 and 2 emissions and Scope 3 where material
- Providing advisory services to help clients understand the value and impact of setting medium- and long-term emissions reduction targets and developing a plan to meet those targets
- Providing financial tools to support decarbonization efforts
- Creating forums for clients to connect with each other and third-parties to share and gain good practices

We developed the “4 R’s” framework to provide a consistent approach across clients. The framework allows us to deepen our client relationships and tailor comprehensive solutions for our clients’ specific low-carbon and decarbonization goals.

**Figure 2: Decarbonization strategy**

The 4 R’s: Core Principles for Decarbonization			
Reduce 	Renew 	Realign 	Remove 
<b>Reduce Carbon Emissions by:</b> <ul style="list-style-type: none"> <li>• Implementing energy efficiency upgrades for HVAC, lighting, refrigeration, water heating, etc.</li> <li>• Undertaking building envelope retrofits or LEED-certified construction of new, more efficient office facilities or manufacturing plants</li> <li>• Upgrading commercial and corporate vehicle fleets to EVs and phasing out carbon emitting vehicles</li> <li>• Adopting carbon capture and carbon emissions sequestration technologies (e.g. 45Q)</li> </ul>	<b>Transition to Renewable Energy by:</b> <ul style="list-style-type: none"> <li>• Installing onsite renewable energy production (e.g. solar panels, fuel cells, etc.)</li> <li>• Committing to electricity purchases from renewable power generation sources through Power Purchase Agreements (“PPAs”)</li> <li>• Purchasing renewable energy attributes (e.g. Renewable Energy Certificates (“RECs”))</li> </ul>	<b>Realign Business Operations and Practices to Lower Emissions by:</b> <ul style="list-style-type: none"> <li>• Pursuing corporate actions through mergers, acquisitions or divestitures that reduce carbon emissions</li> <li>• Reexamining current supplier relationships and exploring new vendor relationships to better reduce carbon emissions across a company’s supply chain</li> </ul>	<b>Remove and reduce unavoidable carbon emissions with disciplined use of carbon offsets to:</b> <ul style="list-style-type: none"> <li>• Meeting “last-mile” carbon reduction targets via Compliance and Voluntary Carbon offsets (e.g. CCA, EUA, RGGI, CORSIA)</li> <li>• Engaging in nature-based and technology-based carbon reduction measures (e.g. reforestation and afforestation)</li> </ul>

As we continue to gain momentum in our sustainable finance efforts, we recognize that our clients have different goals, objectives and approaches to their transition. We are first working to analyze where clients are in their progress to more effectively determine where they need to go and the challenges they may face in their Net Zero journey. For clients who are more advanced and/or in sectors where we have set 2030 Targets, we are working with them to understand their plans and how they align to our Net Zero objectives. While we have engaged with clients for some time around these issues, as part of our [Approach to Zero](#) strategy, we are working to ensure we do it more consistently across all clients and more intentionally with our clients that are in high emitting sectors. As discussed previously in this report, these dialogues with clients will be enhanced as we incorporate more and better emissions-related data into those discussions.

## Business Areas of Focus

To help enable clients to achieve Net Zero, Bank of America works across our eight LOBs on clean energy; efficient, low-carbon power generation and transmission; sustainable transportation with the emphasis on EVs and sustainable fuels; sustainable food and agriculture; clean water and sanitation; recycling and up cycling; and carbon capture and offsetting solutions. We focus our efforts in areas where we can (i) **expand** our product capabilities and existing capital mobilization activities and (ii) **innovate** by bringing new financing solutions to bear for our clients and communities.

To date, our efforts have yielded tremendous progress. In 2021, we mobilized and deployed approximately \$250 billion of capital that is aligned with the UN SDGs, with over \$155 billion of financing aligned to the environmental transition.<sup>20</sup> Examples of our successes include:

- *Tax Equity Financing:* We are a top renewable energy tax equity investor in the U.S. with a portfolio of approximately \$12B as of year-end 2021. Historically, our investments have contributed to the development of approximately 16% (38 gigawatts) of total installed renewable wind and solar energy capacity in the U.S. In addition to utility scale renewable projects, Bank of America has provided financing for distributed solar generation for residential and commercial/industrial customers and electric vehicles.
- *Bank of America Bond Offerings:* Bank of America is a top corporate issuer of ESG bonds having issued \$11.85 billion across nine green, social and sustainability bond issuances. For example, in 2021, we issued our second \$2 billion Equality Progress Sustainability Bond to advance racial and gender equality, economic opportunity and environmental sustainability. This issuance expanded on our first Equality Progress Sustainability Bond by broadening the scope of target populations for eligible Equality Progress Social Assets to include women and Asian American, Pacific Islander and Indigenous people, along with Black and Hispanic-Latino populations. In addition, the eligible Green Asset categories were expanded to include sustainable water and wastewater management, green buildings and carbon capture. The issuance was the first offering following the publication of our [ESG-themed Issuance Framework \(Framework\)](#). The Framework aligns to Bank of America's ESG leadership and the company's sustainable finance strategy, which aims to mobilize and scale capital deployment to help advance the UN SDGs.

<sup>20</sup> See p. 35 of our [2021 Annual Report](#) and our [Approach to Zero](#)<sup>TM</sup> white paper released in April 2022.

We are expanding our current capabilities to support our clients across segments in their transition to more sustainable, low-carbon business models. We are mobilizing capital in our asset-based lending, tax equity and placement activities across specific clean energy sub-sectors (e.g., wind, solar, distributed generation and associated infrastructure). Importantly, we also are developing innovative financial solutions for new and emerging clean energy technologies that will be critical to provide additional carbon reduction beyond traditional renewable energy sources. Examples of how we are supporting our clients across a range of technologies and activities, with case studies of transactions we have completed over the past year are highlighted below.

## Offshore Wind

While offshore wind is already prevalent outside the U.S., there continue to be key opportunities for capacity deployment across both the U.S.'s coastal state and federal waters, along with other key opportunities in the UK and globally.

In September 2021, Bank of America committed approximately \$272 million as one of nine Joint Lead Arrangers, with total construction-to-term loan commitments of approximately \$2.3 billion for Vineyard Wind 1. The project is an 800-MW offshore wind farm to be constructed off the Massachusetts coast, 15 miles south of Martha's Vineyard.



As the first commercial-scale offshore wind project in the U.S., Vineyard Wind 1 is expected to generate electricity for more than 400,000 homes and businesses in the Commonwealth of Massachusetts, save ratepayers \$1.4 billion over the first 20 years of operation and reduce carbon emissions by more than 1.6 million tons per year.

## Electric Vehicles (EV) and EV Charging Infrastructure

The transition of personal and commercial vehicles from internal combustion engines to electric motors necessitates significant investments in production capabilities, charging infrastructure, and customer financing solutions.

Bank of America structured and closed an innovative captive finance program for the consumer lease business with Polestar, a Swedish automotive brand owned in part by Volvo Cars focused on the development of electric performance and passenger vehicles. The transaction facilitates the mass adoption of EVs by providing competitive lease pricing through the efficient use of EV tax credits.



In addition to this transaction, we are positioning ourselves to be a leader in EV lending to our retail clients through education, offers, strategic alliances and cross-product integration. We are helping to accelerate the adaptation by targeting lender relationships with manufacturers and creating co-branded marketing experiences with EV manufacturers or supporting businesses.

## Grid Energy Storage

Grid energy storage will play an essential role in solving the intermittency issues surrounding wind and solar power, backstopping the energy grid and helping prevent brownouts or blackouts.

In November 2021, Bank of America helped advise and place approximately \$1.1 billion of portfolio-level and term debt as part of a \$2.6 billion funding package for Intersect Power's 2.2 GW late-stage utility scale solar and 1.4 GW storage Portfolio. The Portfolio is one of the largest and most efficient private utility-scale solar portfolios in the U.S. and is comprised of six utility scale assets located in Texas and California with expected Capacities on Demand (CoDs)<sup>21</sup> by 2023.



Financing for the Portfolio consists of construction lending, tax equity, land financing and portfolio-level, term debt with industry-leading partners. The transaction represents a unique opportunity to provide capital to a diversified, clean energy portfolio with a highly experienced management team and differentiated approach to structuring offtake agreements that provide compelling, risk-adjusted returns.

## Hydrogen and Fuel Cells

Hydrogen and fuel cells are emerging alternative technologies for the transportation industry. Bank of America is exploring ways to accelerate hydrogen deployment, at scale, and is engaging with subject matter experts to explore ways to develop and support the necessary infrastructure build-out, technological improvements and cost reductions that will be needed to fully and cost effectively commercialize hydrogen.

In June 2021, Bank of America committed \$68 million of tax equity financing to support the purchase of 32.85 MW Portfolio of Bloom Energy's solid oxide fuel cells (SOFC). The 32.85MW portfolio reflects 56 separate project sites with 17 different Commercial and Industrial offtakers, across six states. This is a groundbreaking transaction as part of Bank of America's sustainable finance efforts as it is its first transaction for SOFC technology.



<sup>21</sup> Utility CoDs automatically provide additional processor capacity on a temporary basis within the shared pool. This means that if capacity from one source of energy is unavailable, the user can utilize this additional capacity on a temporary basis to supply energy needs, helping to prevent brownouts or blackouts.



## Biofuels – Sustainable Aviation Fuel (SAF)

Despite gains in aviation efficiency, increases in air travel will continue to drive growing aviation-related emissions. Biofuels, including SAF and waste-to-energy, present an important way to reduce emissions when compared with traditional jet fuel.

In July 2021, Bank of America entered into a 10-year contract with SkyNRG for SAF Certificates for 1.2 million gallons/year, equating to an expected reduction of 10,000 tCO<sub>2</sub> annually. SkyNRG procures or produces SAF, physically supplies the SAF at an airport and sells the SAF with its related Scope 1 CO<sub>2</sub> emissions savings to a fuel supplier or airline. The related Scope 3 CO<sub>2</sub> emissions savings associated with the supply of SAF is purchased through SAF Certificates by Bank of America which funds the Scope 3 premium to reduce our Scope 3 CO<sub>2</sub> emissions from our business airline or transport.



## Renewable Fuels

Renewable fuels provide a source of diversification away from high emitting petroleum products for transportation uses. Following the growing adoption of fuel standards, renewable fuels will help in reducing greenhouse gas emissions and reliance on fossil fuels.

Bank of America acted as exclusive financial advisor to Neste in the formation of a joint venture with Marathon Petroleum Corporation to produce renewable diesel following a conversion project of Marathon's refinery in Martinez, California. Production of renewable diesel, at the facility, is expected to come online in the second half of 2022 and reach its full annual capacity of 2.1 million tons (730 million U.S. gallons) by the end of 2023. This project is expected to increase Neste's renewable products capacity by slightly over one million tons (365 million U.S. gallons) per year. The transaction demonstrates the strength of BofA's Global Natural Resources Investment Banking franchise and further illustrates the firm's commitment to renewable fuels.

NESTE



## Voluntary Carbon Credits

Nature-based solutions are expected to play an increasingly important role in achieving decarbonization in addition to providing biodiversity, resiliency and other co-benefits. Developing a high integrity, liquid and efficient voluntary carbon offset market, as well as financing capabilities to support, will be an essential tool in achieving Net Zero targets.

Bank of America has structured and executed numerous voluntary carbon offset and compliance carbon allowances transactions in 2021. These included transactions completed with an oil refining and distribution company, an integrated electricity generator, and a chemical company across spot carbon offsets on the Verra registry, spot carbon offsets on the Voluntary Carbon Standard (VCS) registry, and EU allowances, respectively.

## Geothermal Energy

Geothermal energy is largely untapped and could be another powerful source of renewable energy as the world moves toward Net Zero.

Bank of America committed approximately \$50 million in term loans as one of the Joint Lead Arrangers in a syndicated \$1,750 million loan refinancing facility for Geysers Power Company. The Geysers Powers Assets comprise an aggregate net nominal capacity of 725 MW, the largest geothermal power producers in the US. The Geysers Assets have strategic importance in California as they serve as a unique renewable baseload resource in the state. The Assets help support California's aggressive Renewable Portfolio Standards that targets renewable electricity of 60% by 2030.



## Water and Waste Management Infrastructure

Water purification, treatment and availability will be essential to supporting the world's increasing population and preventing water scarcity, especially in low-income areas.

In a first-of-its kind Caribbean desalination transaction for Bank of America, we committed to a term loan facility for Seven Seas Water, an owner and operator of water treatment facilities primarily in the Caribbean. The transaction enables the refinancing of existing debt to support Seven Seas Water's existing desalination facilities and potentially grow its presence in the Caribbean, one of the most water-scarce regions of the world in terms of fresh water availability. Desalination is a key technology for addressing long term water scarcity amid growing pressure from climate change.



## Sustainable Agriculture and Land Use Management

Food production needs to keep pace with population growth, especially in low-income areas. This includes driving capital toward advanced climate-controlled farming, plant-based meat alternatives and regenerative agriculture.

To date, Bank of America has structured \$54 million in loans for Little Leaf Farms and raised \$300 million in new capital and equity in partnership with The Rise Fund, Texas Pacific Group's multi-sector global impact investing strategy fund. Little Leaf Farms is a Controlled Environment Agricultural (CEA) producer of lettuce utilizing technologically advanced, sustainable practices. Little Leaf Farms lettuce is grown utilizing captured rainwater, natural light, solar-powered energy and is never treated with chemical pesticides, herbicides, or fungicides. The company currently operates 20 acres of greenhouses in Massachusetts and Pennsylvania, with expansion plans for Pennsylvania and North Carolina. This financing is an example of Bank of America's sustainable finance efforts in support of resilient and sustainable food production.



## Business Model Transitions

Corporations need to transition to low-carbon energy sources across their operations and supply chain. As consumers and customers are embracing climate action, corporates need to respond by transitioning the products and services they offer to be more sustainable.

In September 2021, Bank of America announced a \$2.0 billion 10-year green bond for Walmart, with the net proceeds allocated to finance or refinance, as applicable, a portfolio of eligible green investments. The categories of these investments included: renewable energy, high performance buildings, sustainable transport, zero waste and circular economy, water stewardship, and habitat restoration and conservation. At the time of issuance, the \$2.0B bond was the largest-ever green bond issued by a U.S. corporation. This is also the first-ever green bond from a U.S. retail company. Green and ESG investors represented 40% of final allocations. Four nationally recognized minority- and women-owned firms were included as active bookrunners.



In November 2021, Bank of America was an active bookrunner for the \$348 million IPO of Allbirds, a global lifestyle brand that innovates with naturally derived materials to make better footwear and apparel products in a better way. Allbirds' sustainability focus and business model resonate deeply with consumers and investors alike. Its differentiated products leverage innovative naturally derived materials such as wool, tree fiber, sugarcane and crab shells – leading to a carbon footprint that is 30% lower than that for a standard pair of sneakers.



Allbirds became a public benefit corporation and earned B Corp certification in 2016. It has plans to reduce the per unit carbon footprint for products by 50% by the end of 2025 and by 95% by 2030.

In addition to the work we are doing with our business clients across segments, we are enhancing our products, services and engagement with our individual clients to support their goals to address climate change and other environmental and social issues. Our retail clients are quickly adapting to the EV market, which is rapidly expanding, and we are positioning ourselves to be a leader in EV lending through education, offers, strategic alliances and cross-product integration. We are helping to accelerate the adaptation by targeting lender relationships with manufacturers and creating co-branded marketing experiences with EV manufacturers or supporting businesses.

Our wealth management clients have been increasingly focused on social and environmental causes with climate change cited as one of our clients' highest priority ESG issues. In response, we are actively building out our ESG product offering to allow clients to make investment decisions that align with their ESG values and the causes most important to them, including climate change. We are also developing a portfolio diagnostic tool that provides clients with insights into how well their portfolios align to specific ESG preferences, including themes such as climate action (e.g., alternative energy, carbon emissions) and natural resources (e.g., water use).

### **Assessing Climate-related Risk through Scenario Analysis**

Climate-related risks are divided into two major categories: (1) risks related to the transition to a low-carbon economy, which may entail extensive policy, legal, technology and market changes, and (2) risks related to the physical impacts of climate change, driven by extreme weather events, such as hurricanes and floods, as well as chronic longer-term shifts, such as rising average global temperatures and sea-levels. These changes and events can have broad impacts on operations, supply chains, distribution networks, customers and markets and are otherwise referred to, respectively, as transition risk and physical risk.

Transition and physical risk are inherent across all seven risk types (further described in Risk Management), which include both financial and nonfinancial risks. For example, the impacts of transition risk can lead to and amplify credit risk or market risk by reducing our customers' operating income or the value of their assets, as well as expose us to reputational and/or litigation risk due to increased regulatory scrutiny or negative public sentiment. Similarly, physical risk can lead to increased credit risk by diminishing borrowers' repayment capacity or impacting the value of collateral. In addition, physical risk could pose increased operational risk to our facilities and people.

To understand how climate-related risks could impact us and our clients, we evaluated various scenarios looking at both current exposures to climate-related risk and forward-looking assessments of potential impacts, including those associated with a 1.5°, 2° or 3° C rise in global temperatures.

In our 2020 TCFD report, we highlighted our evaluation of transition and physical risk on certain samples of our portfolio, looking at a subset of energy clients to evaluate transition risk and a subset of mortgages to evaluate potential physical risk impacts.

Since that time, we have incorporated climate-related risks into our existing enterprise-wide scenario analyses framework and processes. These processes are used to support capital planning, recovery and resolution assessments and overall risk management. By integrating climate scenario analysis into these existing enterprise capabilities, we can more effectively assess potential pathways in the transition to a Net Zero economy and assess the impact on business and risk management decisions. This includes evaluating the impact of different transition and physical-related risks and events as well as providing deeper insight into how climate-related risks and opportunities may evolve. The objective of climate scenario analysis is to understand and assess the impacts across a range of potential outcomes, rather than selecting a single path. The range of outcomes helps broaden our understanding of potential financial impacts and can inform business strategy and risk management decisions.

To this end, in 2021 we began by designing a single exploratory exercise leveraging the NGFS Disorderly scenario released in 2020. The analysis focused on specific portfolios (commercial lending, consumer lending and trading) and risk types (credit, market and liquidity) with a static balance sheet to test the framework and identify focus areas for further development in future designs.

We then expanded our work in the second iteration of the exploratory exercise to consider multiple scenarios including an Orderly Transition, Disorderly Transition and Hot House scenario. We leveraged a range of publicly available scenarios, including the 2021 NGFS scenarios, and the associated climate science, and, in line with our established processes, supplemented the scenarios with Company specific customizations to incorporate select relevant risks for the Company. Additionally, a dynamic

balance sheet was introduced to begin building capabilities to model financing activities in the long term and test the potential strategic reallocation of assets based on input from business and risk leaders. Further enhancements included expanded industry coverage, an operational risk assessment, additional physical risk analysis and other sensitivity analysis used to adjust model-based results or assess scenario customizations.

Certain regulatory scenarios were embedded into our scenario analyses to perform benchmarking, further test internal capabilities and comply with regulatory requests. In particular, the Bank of England Climate Biennial Exploratory Scenario – Late Action was used to perform additional sensitivities for select lending portfolios and the 2022 Single Supervisory Mechanism Climate Stress Test exercise was executed for the Bank of America Europe DAC subsidiary and was submitted to the local regulator.

Key metrics assessed in these exploratory exercises included, but were not limited to, loan balance projections, net charge offs, loss rates and underlying drivers (probability of defaults and loss given defaults) across key industries and damage to physical assets.

The table below illustrates key features of the latest internal exploratory scenario run in 2021. The internal scenarios are updated dynamically each time the assessments are completed in order to take into account the latest information available.

	Orderly	Disorderly	Hot House
<b>Overview</b>	Stringent climate policies are introduced early to limit global warming to 1.5° C, and key countries are able to achieve Net Zero emissions by 2050.	Delayed policy action by the government such that annual emissions do not decrease until 2030. Strong policies are then introduced at a higher cost to limit global warming to 2°C.	Little to no change is made to current climate policies such that climate goals are not met and global warming is above 3°C.
<b>Short-term (1-3 years)</b>	High Transition Risk EU and U.S. governments introduce carbon tax Revenues in high emitting industries (Energy, Auto, Utilities, Mining, etc.) decline Regional Unemployment Rate and House Pricing Index impacted in select states with Mining concentration Low Physical Risk (Acute) Coastal flooding, hurricanes and storms in Europe	Low Transition Risk Transition follows current trend of change in consumer preference, no policy actions taken Low Physical Risk (Acute) Coastal flooding, hurricanes and storms in Europe	Low Transition Risk Transition follows current trend of change in consumer preference, no policy actions taken Low Physical Risk (Acute) Coastal flooding, hurricanes and storms in Europe
<b>Medium-term (3-10 years)</b>	Medium Transition Risk Government bans sale of internal combustion engine (ICE) vehicles in favor of EVs Idiosyncratic single name companies default Tax incentives for companies going green Medium Physical Risk (Acute and Chronic) Government uses carbon tax revenue for climate abatement measures Drought in parts of Europe	High Transition Risk EU and U.S. governments introduce carbon tax Revenues in high emitting industries (Energy, Auto, Utilities, Mining, etc.) decline Idiosyncratic single name companies default Medium Physical Risk (Acute and Chronic) Coastal flooding, hurricanes, storms and drought in Europe	Low Transition Risk Transition follows current trend of change in consumer preference, no policy actions taken High Physical Risk (Acute and Chronic) Coastal flooding, hurricanes, storms and drought in Europe
<b>Long-term (10-30 years)</b>	Low Transition Risk Change in energy mix with significant shift to greener alternatives, for example, share of EV is 95% Low Physical Risk (Mostly Acute) Coastal flooding and hurricanes	Low Transition Risk Change in energy mix with shift to greener energy. For example, share of EV is 85% Medium Physical Risk (Mostly Chronic) Rising sea level and Drought in Europe Chronic weather events impact residential and commercial real estate prices Insurability risk in select regions	Low Transition Risk Change in energy mix follows current trend. For example, share of EV is 50% High Physical Risks (Mostly Chronic) Rising sea level and Drought in Europe Chronic weather events impact residential and commercial real estate prices Insurability risk in select regions



## Transition Risk

Within each scenario we evaluated the impacts of transition risk – in particular, policy action or inaction – on our portfolio. This included analyzing variables such as carbon price impacts, government bans on certain high-emitting products, changes in commodity and energy prices (including renewables and various fossil fuels), and the energy mix under each temperature and policy pathway.

The scenario analysis demonstrated that various sectors of the economy may be impacted in different ways depending on the nature of the scenario. While industries like energy and transportation were more impacted than other industries, due to the nature of the scenarios, climate-related government policies and regulations designed to reduce GHG emissions can have a significant impact on all sectors of the economy by affecting the value of financial assets, the profitability of corporations and the behaviors and preferences of consumers. It can also prompt a change in fossil fuel prices relative to renewable energy prices, and impact income and creditworthiness of some borrowers. Consequently, the energy transition can affect the value of market portfolios of banks and insurance companies and increase credit risk as the economic impact of transitioning to a carbon-neutral economy can affect the debt servicing capacity of counterparties along with other potential impacts. The impact from transition risk may vary by country and state based on the government or authority's response to climate change, corporation and consumer responses, as well as secondary effects such as impacts to regional employment caused by a transition away from certain industries that in turn may result in decreases in house prices and overall, reduced local economic development, etc.

The speed at which climate risk could impact the Company whether through government policy change, rapidly evolving consumer preferences or the markets repricing certain assets varied based on the multiple ways in which the risks manifest themselves, highlighting the importance of sensitivity analysis. With over \$1.1 trillion in committed commercial credit exposure as of December 31, 2021<sup>22</sup> spanning nearly every sector of the global economy, it is possible that the Company could experience credit losses or lose market share and/or revenue associated with climate-related transition risk if our current or future clients do not successfully transition to a lower emissions economy.

However, the transition to a Net Zero economy also presents opportunities for the company, such as financing investments in technological developments supporting the transition to a Net Zero economy and working with clients to manage policy risk and tap into new financing incentives. Some sectors contribute more to emissions but Net Zero has implications across all parts of the economy and will require major investment into decarbonization solutions over the next 30 years. Introducing a dynamic balance sheet into our scenario analysis allowed us to begin testing our ability to reallocate assets and further evaluate the impact based on certain decisions and abilities to capitalize on the opportunities presented under different considerations. The impact from transition risk for the Company's exposures will likely materialize at the sector or individual counterparty level. Therefore, it is critical to add relevant granularity to assess this potential impact from and vulnerabilities to transition risk and further evaluate how that impact may be mitigated by certain actions.

## Physical Risk

Physical risks can be acute (event driven) or chronic (long term shifts in climate patterns) and can impact the Company in the short, medium and long term. Our climate scenario analysis work looked at the various types of physical risks and assessed them across different time horizons to see how they might impact our portfolios. For example, home prices in our consumer mortgage activities may be affected, as physical risks adversely impact homes in specific geographies in which the Company lends. Additionally, the Company has a large portfolio of Bank-owned or leased real estate to support our customers and employees. Analyzing potential physical risk impacts across different elements" has the benefit of enabling the Company to better plan for the impact climate change may pose to the our overall operational resilience. Examples of these include: (1) extreme flooding and storm surge across the New York State area, resulting in elongated economic impacts to homes, buildings, infrastructure and businesses over several months; and (2) occurrence of a low pressure extra-tropical cyclone with hurricane strength winds across Europe, causing damage to a substantial number of residential and commercial buildings and having a major impact on transportation and supply chains.

The Company's scenario analysis further enabled a more detailed assessment of physical risk in particular for consumer and commercial real estate across a number of physical risk perils and scenario severities. For instance, beyond extreme flooding, storms, cyclones and hurricanes it is also important to evaluate extreme temperatures leading to unexpected frosts or blizzards as well as chronic events such as widespread drought.

<sup>22</sup> Refer to Table 36 of our [2021 Annual Report: Bank of America Corporation \(BAC\)](#) for Commercial Credit Exposure by Industry.

## Synopsis of Climate Scenario efforts

The Company's exploratory climate scenario analysis deepened our understanding of how various risks and opportunities may be transmitted, which in turn will help us be better prepared to address any potential vulnerabilities. Undergoing climate scenario exercises has enabled us to assess how different climate-related risks may materialize, provided estimates of the associated financial impacts and considerations for our business and risk management assessment, and allowed us to enhance our forecasting capabilities across the longer time horizons required in climate scenario analysis. The implications are important to the Company's strategy of Responsible Growth.

The Company has taken a deliberate approach to climate scenario analysis prioritizing the efforts to date on business activities deemed most impacted by climate change, focusing on assessing credit risks (both consumer and commercial lending), market risks, operational risk and liquidity risk. This focus on key risks helped to accelerate our current efforts as well as identify opportunities to improve current capabilities. We will continue to broaden the range of different scenarios that we assess and enhance the granularity of the assessments to enable borrower-level review of impacts for high-climate-risk industries in order to effectively assess the associated climate-related risks that they face. However, forecasting over longer time horizons with limited historical data leads to predictions that are inherently more uncertain and difficult to produce and assess relative to traditional bank stress tests. Therefore, one of the key lessons we learned through our scenario analysis efforts has been understanding a range of outcomes and sensitivities versus solely focusing on traditional metrics such as profit and loss.

Subsequent to our internal work on climate scenario analysis the Company was selected to participate in the European Central Bank's (ECB) Single Supervisory Mechanism (SSM) Climate Stress Test. This regulatory exercise was comprised of various modules including 1) an in-depth qualitative questionnaire, 2) historical analysis on revenue concentrations for sectors most impacted by climate change, 3) estimated client financed emissions for counterparties within prescribed sectors and 4) a series of long and short-term climate scenarios covering both transition and physical risk.

Participation in this exercise further accelerated our climate scenario analysis efforts and helped guide our work going forward. Specifically, it helped inform future data and modeling enhancements, prioritization and scope of activities included in scenario analysis and how to enhance the integration of business strategy into our scenario analysis.

While climate scenario analysis is still in the early stages, the Company is committed to enhancing our capabilities. This analysis plays a critical role in being able to measure and manage climate related risks and therefore we expect it to be a priority to improve and expand on our current capabilities. As climate scenario analysis matures, we would foresee sharing additional detail in future TCFD reports.

## Environmental Justice

We believe there is a need for greater societal attention to the disparate impacts that climate change has and will continue to have on vulnerable communities. We are working to integrate an environmental justice lens across the breadth of our work, including operations/supply chain, sustainable finance, climate risk and philanthropy.

### Operations

As part of our efforts to achieve and maintain carbon neutrality in our operations, we purchase carbon offsets for unavoidable emissions. As we evaluate carbon offset opportunities, we are prioritizing offsets that also have environmental justice benefits. An example is a carbon offset opportunity that empowers African American small woodlot owners to adopt climate smart practices while packaging their rural land into an investment-grade carbon offset project.

### Sustainable Finance

Our Sustainable Finance team is incorporating environmental justice principles into a range of financing strategies/opportunities. One important area on which we are focused is driving a more sustainable future for affordable housing: utilizing more sustainable materials, renewable energy, energy efficiency, resilience hubs, increased trees and park space, less asphalt (contributes to extreme heat), and fresh food markets in “food deserts.”

### Climate Risk

We are working across relevant teams to determine the tools and processes to incorporate social and demographic data with physical risk data so that business leaders can make informed risk decisions and best serve the needs of homeowners in vulnerable areas.

### Philanthropy

We are funding a wide array of environmental justice initiatives, from energy efficiency for affordable housing to workforce programs to connect minority contractors with the growing opportunities afforded by greenhouse gas reduction efforts.

A particular focus for us has been urban tree planting – a nature-based resilience solution to address impacts of extreme heat and related health issues. Minority and low-income communities have fewer trees in their neighborhoods, which means those neighborhoods are hotter and more dangerous<sup>23</sup> during extreme heat events. Heat is the number one killer among extreme weather events – more than hurricanes, tornados, floods or wildfires. We have partnerships with American Forests and the Arbor Day Foundation, which are both working to address this historic challenge in these communities.

On a global scale, we are funding work by the Nature Conservancy to use creative financing mechanisms to protect, preserve and enhance coral reefs, which increase protections for vulnerable coastal areas during hurricanes and storm surges.

We have also worked with Water.org to expand access to clean and safe water through small loans that are used to provide running water and or toilets in homes without those basic necessities.

<sup>23</sup> [Climate Change and Extreme Heat: What You Can Do to Prepare \(cdc.gov\)](#) Page 11: “Extreme heat causes more deaths than any other weather-related hazard—more than hurricanes, tornados, or flooding.”

## Employee Engagement and Training

Executing against our Net Zero objectives requires education and engagement across the enterprise. To achieve our Net Zero Goal we are committed to cultivating the unique skill sets and substantial expertise required to navigate the rapidly evolving disciplines of ESG, climate risk management and sustainable finance.

Our Human Resources team worked with internal subject matter experts to develop an education and training portal known as the ESG, Climate and Sustainable Finance College. In addition to many other resources, the online training portal includes Net Zero awareness training designed to increase employees' knowledge and understanding of how to best support clients in reaching Net Zero. We have created forums for teammates across LOBs and control functions to engage and discuss climate implications on businesses and clients and a growing number have obtained professional certifications in climate and sustainability. Our aim is to help clients understand the primary decarbonization strategies and climate-related considerations for individual sectors and the traditional and new financing solutions we can offer to assist in their transition.

### 2021-2022 Employee Climate Education

- Approximately 26,000 members across 33 countries are part of our My Environment® employee program, which connects Bank of America teammates across the globe to learn from experts, share knowledge and volunteer in their communities
- Approximately 9,000 employees visited the ESG, Climate and Sustainable Finance College page for learning materials
- Employees completed over 31,000 ESG, climate and sustainable finance training programs
- Over 4,000 employees participated in live climate risk awareness sessions, including a discussion with our CEO and other senior executives on our environmental strategy and path to help our clients transition to a Net Zero economy
- Approximately 60 teammates earned Sustainability and Climate Risk (SCR®) certificates, as granted by the Global Association of Risk Professionals

## Public Policy Advocacy

Achieving Net Zero will require collective action by governments at all levels, corporations, individuals, nonprofits and other actors. Our public policy team is engaged with policy makers across the globe to help ensure we understand and, where appropriate, work to influence potential policy changes that could impact the Company or our clients. We are supportive of policies that will help accelerate the transition to a low-carbon economy and have continuously stated our support for a price on carbon.

Independently, and working with trade associations and other collaborations, we advocate for more urgent action on climate change by the public and private sectors and promote policies that align with the role played by banks in helping to finance the transition to Net Zero:

### Climate risk and GHG emissions disclosure

While we have put significant support behind voluntary efforts to drive transparent, comparable and consistent climate risk and GHG emissions disclosures, we believe regulation is needed. Organizations across markets and geographies will greatly benefit from common measurement tools and disclosure practices to help accelerate the transition of the global economy toward lower (and ultimately Net Zero) carbon emissions. Consistent with the foregoing and in support of a regulated disclosure regime for climate-related risks and GHG emissions, we submitted a comment letter in June 2022 on the SEC's proposed rulemaking on climate-related disclosures.<sup>24</sup>

### Capital investment

As discussed above, significant capital investment will be needed to drive the innovation necessary to transition to a Net Zero economy. To facilitate such capital investment, we encourage governments to emphasize policies that reduce the cost to deploy existing and emerging technologies, and establish safeguards to protect workers and communities to ensure a just transition. Capital investment can take many forms, including:

- Using public finance to enhance returns for investments in climate technology, including expanding and increasing tax incentives.
- Using public finance (either concessionary or first loss) to de-risk and reduce the “green premium” on emerging technologies. For example, in the U.S., improve and expand the Department of Energy’s loan guarantee program to drive private sector innovation in areas such bioenergy, carbon capture utilization and storage, hydrogen and nuclear energy.
- Using public procurement power to drive adoption of existing and emerging technologies to reduce costs for all participants.
- Ensuring that workers in affected communities are supported during and throughout the transition.

### Infrastructure

We encourage the development of government policies that support large-scale infrastructure investments that will be required to reach Net Zero, such as grid modernization, decarbonization of public transportation and electric vehicle charging infrastructure, including:

- Advancing efforts to bring affordable and climate-resilient clean energy to all citizens via innovative solutions that are flexible and technology neutral.
- Incentivizing investment in smart grid infrastructure by electricity generators in order to accelerate a more stable transition to diversified clean energy.

### Complementary role of government-funded finance institutions

To achieve Net Zero commitments, we support the development and implementation of risk-based governmental policies aimed at transitioning to Net Zero. Government policies should enhance the roles of participants from across the financial sector, including multilateral development banks, to deliver innovative financial products and services that can help reduce carbon emissions, improve climate resilience, and incentivize the development of innovative and scalable technologies.

To encourage policy action, we are collaborating with trade associations, through cross-sectoral and financial sector alliances,

<sup>24</sup> See SEC proposal at <https://www.sec.gov/rules/proposed/2022/33-11042.pdf> and our comment letter at <https://www.sec.gov/comments/s7-10-22/s71022-20131805-302241.pdf>



and with non-profit partners. Examples of trade associations with which we are engaged include: Institute of International Finance, Global Financial Markets Association, Business Roundtable, the U.S. Chamber of Commerce and Bank Policy Institute. Of importance, along with several other members of the U.S. Chamber of Commerce, we formed an independent Climate Solutions Working Group, which has provided a collective voice for Chamber members that have prioritized climate action to engage with the Chamber on climate policies. In 2020, the Chamber issued a new policy position on climate change, which supports: a market-based approach to accelerate GHG emissions reductions; continued investment in research and development that advances technologies and innovation offering the best solution for managing climate risks; and the promotion of climate resilient infrastructure.

More recently, we have worked as part of the Sustainable Markets Initiative, GFANZ and NZBA. We also work with environmental partners such as the Center for Climate and Energy Solutions, Ceres, Clean Air Task Force and World Resources Institute to support science-based environmental research and other climate-related initiatives. In Appendix 1, we outline key public or private initiatives that Bank of America is committed to or engaged in.

### **Political Spending Activities**

For additional information on our political spending activities, please refer to our Political Activities disclosure available on the Bank of America Investor Relations website.

### **Thought Leadership**

Through the experience of our own journey to Net Zero, and our work to assist our clients on theirs, we identify areas of need for deeper understanding and greater public awareness. Our ESG Research team regularly publishes thematic and equity research that provides guidance to investors on how various ESG factors can be connected to company performance and help inform decision-making. In April 2022, we launched the Bank of America Institute, a think tank dedicated to uncovering powerful insights that move business and society forward. Drawing on data and resources from across the Company and the world, the Institute delivers important, original perspectives on the economy, ESG and global transformation.

## Highlights

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Since our 2020 TCFD Report we have enhanced our climate risk management efforts by:

- Incorporating climate risk language into the Company's Risk Framework and associated enterprise-wide training
  - Enhancing our climate risk inventory with new climate-related risks and creating risk watch lists for climate-sensitive sectors
  - Conducting exploratory enterprise wide climate scenario exercises in order to better understand the impact of climate risks on key business activities
  - Deploying the first generation Climate and Environmental Risk Data Platform to host external and internal climate risk data
  - Developing a suite of climate risk focused metrics and dashboards
  - Enhancing policies, procedures and standards to include climate risk considerations
  - Piloting a Climate and Environmental Risk Assessment as part of credit underwriting in EMEA in preparation for broader roll out across the Company to continue to enhance transaction-level due diligence processes
- 

## Risk Framework

At Bank of America, a culture of managing risk well is fundamental to our values and our purpose, and how we drive Responsible Growth. It requires all employees to focus on risk in all activities and encourages the necessary mindset and behavior to enable effective risk management and promote sound risk-taking within our risk appetite. This approach is reinforced in our Code of Conduct.

Our enterprise Risk Framework sets forth roles and responsibilities for the management of risk by FLUs, GRM, other control functions and Corporate Audit; provides a blueprint for how the Board, through delegation of authority to committees and executive officers, establishes our risk appetite and associated limits; and describes the seven key types of risk we face: credit, market, liquidity, compliance, operational, strategic and reputational risk. As climate risk spans all key risk types, we have developed and continue to enhance processes to embed climate risk considerations into our Risk Framework and risk management programs established for each of our seven risk types. In 2021, we added a new section into the Company's Risk Framework to address how we define and manage climate risk, including examples of how it manifests across multiple risks types. Our Environmental and Social Risk Policy Framework aligns with our Risk Framework and provides additional clarity and transparency regarding our approach to environmental and social risks, inclusive of climate risk.

## Bank of America's Seven Key Risk Types

### Key Risk types

- Strategic
- Credit
- Market
- Liquidity
- Operational
- Compliance
- Reputational

All employees are responsible for proactively managing risk as part of their day-to-day activities through prompt identification, escalation and debate of risks. FLUs have primary responsibility for managing risks inherent in their business. Within GRM, the Global Climate Risk team is

responsible for establishing a strong risk management program that identifies, measures, monitors and controls climate risk and works closely with FLUs to improve practices. This includes working with FLUs to assess what parts of our business (clients, assets and operations) are most exposed to climate risks; working across risk types to integrate climate risk considerations more fully into our risk management, risk identification and risk appetite; and supporting compliance with climate risk regulation and disclosure requirements globally.

The table below highlights how climate-related risks could impact the Company across each risk type with key actions we have taken to assess and manage the risks:

Risk Type	Risk Type Definition	Physical Risk	Transition Risk	Key Progress Highlights
Credit	Risk of loss arising from the inability or failure of a borrower or counterparty to meet its obligations	Impacts on repayment capacity (both primary and secondary) caused by physical climate events	Financial impacts to client revenue, income, cash flow, assets or collateral due to climate-related policy, legal, technology or market changes, including shift to climate-related investments	Assessed physical and transition risks for countries and industry sub-sectors to develop industry and country climate risk ratings  Created a Center of Excellence to steer the implementation of a client level climate and environmental risk assessment
Market	Risk that changes in market conditions adversely impact the value of assets or liabilities or otherwise negatively impact earnings	Impacts to assets valuations or secondary exposure to insurers caused by physical climate events	Impacts to market prices due to climate-related policy, legal, technology or market changes	Incorporated climate risk considerations into new product review process  Created daily risk reporting and monthly dashboards that track climate Key Risk Indicators (KRIs) and Sudden Transition stress test results
Liquidity	The inability to meet expected or unexpected cash flow and collateral needs while continuing to support our businesses and customers under a range of economic conditions	A run on deposit balances, unexpected increases in unfunded commitments and decrease in access to funding providers due to physical events	Impact of clients needing more liquidity to fund capital expenditures and other investments in response to climate-related regulatory changes or changes in market appetite	Identified sources of liquidity risk and developed metrics for reporting purposes.  Leveraged industry risk assessments to monitor concentrations in funding sources and potential funding uses
Compliance	Risk of legal or regulatory sanctions, material financial loss or damage to the reputation of the Company arising from the failure of the Company to comply with the requirements of applicable laws, rules and regulations or our internal policies and procedures	Workplace disruptions from physical climate events impact our ability to comply with internal policies and procedures	Emerging requirements for classification and disclosure vary widely across jurisdictions	Established risk functions to oversee climate-related regulatory monitoring, interpretation, implementation and response
Operational	Risk of loss resulting from inadequate or failed internal processes or systems, people or external events	Workplace disruptions from physical climate events impact our ability to deliver services and or execute important controls	Changes required to comply with emerging regulatory requirements impact internal or third-party processes	Developed process for identifying climate-related operational losses
Strategic	Risk to current or projected financial condition arising from incorrect assumptions about external or internal factors, inappropriate business plans, ineffective business strategy execution or failure to respond in a timely manner to changes in the regulatory, macroeconomic or competitive environments in the geographic locations in which we operate	Impact of incorrect assumptions, inadequate planning or poor strategy execution regarding risk of physical climate events and trends	Impact of inability to quickly adapt and execute a strategy to address changing regulatory requirements, client demands, or the competitive environment as it relates to the transition to a lower-carbon economy	Developed ongoing scenario analysis to adapt our strategic planning to different climate trajectories
Reputational	The risk that negative perception of the Company may adversely impact profitability or operations	Impact of perceived inadequate management of physical climate events on our operations	Impact of negative perceptions regarding financing of high-emitting sectors or ability to achieve climate commitments	Published our Environmental and Social Risk Policy Framework to maintain transparency of our climate risk management

The three lines of defense model provides clear ownership and accountability for managing risk and includes FLUs, which own and proactively manage all risks in business activities as the first line of defense; GRM, which oversees risk-taking activities within the FLUs and across the enterprise and provides independent assess and effective challenge of risks as the second line of defense; and Corporate Audit, which provides independent validation through testing of key processes and controls as the third line of defense. Effective management of climate risk requires coordinated governance, clearly defined roles and responsibilities across all three lines of defense, and well-developed processes to identify, measure, monitor and control risks.

**Identify**

**Measure**

**Monitor**

**Control**

### **Risk Identification**

To be effectively managed, climate risk must be proactively identified and well understood, incorporating input from FLUs and control functions. At Bank of America this occurs largely through the risk identification (Risk ID) process, which focuses on creating a single enterprise-wide risk inventory where risks of all types from across all LOBs can be captured consistently.

To enhance our risk inventory as it relates to climate risk, the Global Climate Risk function facilitated climate risk identification workshops with stakeholders from across the company including the LOBs. During the workshops, teams were educated on the nuances of climate risk and how it could impact their business, resulting in the addition of new climate-related risks to the risk inventory. Every LOB identified transition risk, chronic weather, and extreme weather as a risk with varying levels of materiality, severity and likelihood, and identified where climate risk is a driver for other risks. Beyond additions to the risk inventory, the workshops resulted in sector- and industry-specific climate risk watch lists to support prioritization for risk measurement and data capture.

We recognize that the lack or insufficiency of policy action could impact our ability to achieve Net Zero and potentially increase our climate-related risk. For instance, our ability to fully understand our clients' emissions and transition risk is impacted by the climate-related disclosure requirements of various governments. Additionally, our ability to ensure we have sufficient insurance on the loans we underwrite to protect us from physical risk depends on updated flood-zone maps and location specific flood insurance requirements. Further, our clients ability to transition and our ability to meet our 2030 Financing Activity Targets depends on consistent national energy policies.

## Risk Measurement

Measurement of climate risks is conducted using a range of methods with key examples including scenario analysis and stress testing (mentioned previously) and industry and country level assessments. Industry and country level assessments are conducted by Credit Risk and leveraged across a broad spectrum of climate-related functions.

The industry climate risk assessment evaluates an industry's susceptibility to climate risks. Where a group of industries are rated high or moderate risk, we prepare a Climate Risk Supplement to each Industry Risk Guidance (IRG) document. The IRG document serves as a tool for client selection/onboarding and informs our overall sector views on climate risk as a starting point for more detailed sub-sector discussions and then client level discussions. Research and expert opinion from enterprise industry owners in the Risk and Credit organizations formed the basis for our assessments. Recognizing that risks may evolve, ratings are typically evaluated annually and help us, on an ongoing basis, to understand the climate risk that may impact the general credit, market or liquidity risk associated with issuers or counterparties.

In our 2020 TCFD report, we identified sectors most likely exposed to climate-related risk based on a number of factors, including material contributions to GHG emissions, revenue streams highly sensitive to physical impacts, investment in technology and/or operations needed and insurance availability. We also indicated our intent to prioritize further research and action into the most vulnerable sectors. Since that time, as our understanding of climate-related risk has evolved, we have added additional sectors of heightened vulnerability. We are prioritizing efforts within the sectors we consider most vulnerable to climate risk to mitigate the risk. The table below highlights our exposure to these sectors. Within each sector there are varying levels of vulnerability at the sub-sector and client level. (See Table 36 of our 2021 Annual Report on Form 10-K for further details on commercial credit exposures by sector. Note the data below excludes paycheck protection program loans and other adjustments, and therefore differs from the sector exposures reported in the Form 10-K.)

### Committed Commercial Credit Exposure to sectors of heightened vulnerability to climate-related risk

\$ in Millions as of 12/31/2021

Industry Sector	Total Committed Commercial Credit \$ Exposure	% of Total \$ Exposure
Energy	34,077	3.02%
Utilities	38,080	3.38%
Automobiles & Components	17,039	1.51%
Capital Goods	83,728	7.42%
Consumer Durables & Apparel	21,115	1.87%
Consumer Services	47,261	4.19%
Food & Staples Retailing	12,216	1.08%
Food, Beverage & Tobacco	45,287	4.02%
Government & Public Education	50,052	4.44%
Insurance	14,312	1.27%
Materials	53,497	4.74%
Real Estate	95,947	8.51%
Transportation	31,891	2.83%
<b>Total</b>	<b>544,503</b>	<b>48.28%</b>

Our 2030 Financing Activity Targets reflect our commitment to prioritize our efforts toward the key sectors exposed to transition risk. The table below illustrates the sub-sectors included in our financed emissions and emissions intensity reporting and Net Zero targets though not all clients within these sub-sectors are included in our 2030 Targets. As detailed in Appendix 2, our financed emissions calculations include business loans (as defined by the PCAF Standard) to clients in Global Banking and Global Markets portfolios within the auto manufacturing, energy and power generation sectors.

While our Net Zero Goal covers all our financing activity, we are prioritizing sectors and clients for reporting and interim



targets based on data availability and materiality of emissions. Within Energy, our 2030 Financing Activity Targets include producers, refiners and integrated companies as those are the sub-sectors that have and report oil and gas production for physical intensity calculations. Similarly, within Utilities (including power-related Government sector clients), our 2030 Financing Activity Targets include power generators; and within Autos and Components, our 2030 Financing Activity Targets include auto manufacturers. We excluded oil and gas servicing companies from our 2030 Financing Activity Targets as these companies do not produce energy and therefore are not relevant for a physical emissions intensity target (i.e., there is no information for the denominator in the calculation). However, we recognize the role these companies play in the energy transition and therefore are including all companies in our financed emissions calculations and target management efforts. Over time, we plan to assess the financed emissions across additional sectors within our commercial credit portfolio.

## Industry Groups Included in our 2030 Financing Activity and 2050 Net Zero Targets

Exposure in Millions as of 12/31/2021

Industry Sector	Industry Group	Committed Commercial Credit Exposure	% of Total \$ Exposure	Industry Group Included in current Financed Emissions Calculations	Industry Group Included in 2030 Financing Activity Targets
Energy	Oil And Gas Exploration And Production	11,468	1.02%	✓	✓
	Oil And Gas Refining And Marketing	8,908	0.79%	✓	✓
	Integrated Oil And Gas	7,233	0.64%	✓	✓
	Oil And Gas Storage And Transportation	3,355	0.30%	✓	Excluded
	Oil And Gas Equipment And Services	2,316	0.21%	✓	Excluded
	Oil And Gas Drilling	683	0.06%	✓	Excluded
	Coal And Consumable Fuels*	113	0.01%	✓	Excluded
Utilities	Electric Utilities	11,397	1.01%	✓	✓
	Multi-Utilities	10,366	0.92%	✓	✓
	Gas Utilities	7,945	0.70%	✓	✓
	Independent Power Producers And Energy Traders	6,278	0.56%	✓	✓
	Water Utilities	2,095	0.19%	Excluded	Excluded
Government & Public Education	Government	39,314	3.49%	Excluded	Excluded
	Government - Municipal or other Public Utility	10,738	0.95%	✓	✓
Autos And Components	Automobiles	9,181	0.81%	✓	✓
	Auto Components	7,857	0.70%	Excluded	Excluded

\*Coal is excluded from our GHG emissions reduction targets as it is covered by our policy to phase out of all coal mining companies that generate more than 25% of their revenues from thermal coal mining by 2025. As illustrated above, exposure to pure play thermal coal mining companies is now 0.01% of our total committed commercial credit exposure across all industries.

Within each of these sectors, individual clients may have different levels of risk. For instance, a client with a credible Net Zero goal and clear transition plan may present lower transition risk to us than a client who does not have a Net Zero goal or clear transition plan. Likewise, clients in the same sector but different regions may experience different elements of climate-related risk. For instance, an energy client in a region where a carbon tax has been implemented will likely experience a different level of risk than an energy client in a region where a carbon tax has not been implemented.

With this in mind, in addition to assessing climate-related risks at the industry level, we also evaluated the risk at a country level, assigning climate ratings to all countries in our coverage universe, based on a proprietary methodology and expert judgment, and using a range of third-party indicators covering both physical and transition risk. For companies with businesses in multiple jurisdictions, these country assessments also serve to inform our view of potential physical and transition risks at the borrower level. Quantitative metrics yield an indicative classification, and analytical discretion is then applied to arrive at final classifications. From a market risk perspective, country-level ratings are relevant for understanding risks associated with the sovereign debt of countries that have high physical risk (e.g., sea-level rise) and/or transition risk (e.g., an economy dependent on fossil fuel production).

Given the complexities of assessing climate-related risk at a client level, we have created a Center of Excellence to steer the implementation of client-level climate and environmental risk assessments (CERAs). We piloted this client-level due diligence process as part of our credit underwriting in EMEA and are now working to expand the assessments globally throughout the year. The CERA considers both physical and transition risks and country climate risk classifications, where relevant, and expect that it will provide additional insight into a borrower's response to climate risks, including the incorporation of mitigating factors such as insurance and management plans and expertise.

In 2022, we deployed the first-generation of the Climate and Environmental Risk Data Platform (CERDP) to host external and internal climate risk data to enhance our ability to quantify, analyze and report climate-related risks and opportunities. CERDP serves as the central repository to source third-party data and to aggregate climate-related data to support multiple risk and business management processes, such as scenario analysis, client profiling, financed emissions calculations and reporting. Additionally, the platform interfaces with existing internal applications to help ensure climate data is maintained, controlled and leveraged consistently to quantify physical and transition risks.

## **Risk Monitoring**

We are enhancing business processes to incorporate climate risk control monitoring across all seven risk types, including regular climate risk updates to the Board. The FLUs are beginning to establish independent mechanisms to measure and monitor climate risk at the borrower and portfolio level.

For example, for our markets business, we deployed daily climate risk reporting; a monthly dashboard, which leverages a common enterprise taxonomy considering a clients' industry, sector and country to track Key Risk Indicators (KRIs); and a monthly stress run for the purpose of risk identification. Stress tests are used to understand the impact of transition risks on trading portfolios with a particular focus on identifying concentrations of risk within the portfolio. Metrics include market risk sensitivities to climate-impacted markets, sectors and countries such as impacts to commodity prices, securities prices and foreign currencies. Metrics continue to be developed to take advantage of improved industry data and modelling for the measurement of both transition and physical risks.

In addition, country and industry climate risk dashboards are in place at the Company and legal entity levels and identified climate risks across each risk type are incorporated in the portfolio review process. These dashboards are used to drive risk-based discussions across the first and second lines of defense.

In EMEA, we piloted a climate risk dashboard, which we plan to roll out across the Company to help drive risk management and business decision making. These dashboards provide a summary view of key metrics and trends, quarterly developments, and deep-dive on additional topics of interest and allow for an asset-level review of climate risk. The metrics provide coverage across a number of key categories: (1) overall exposure; (2) counterparties, sectors and asset classes requiring additional focus; (3) vulnerability to transition risks; and (4) vulnerability to physical risks. Metrics include portfolio and borrower-level exposure against country and industry classifications to evaluate a borrower's vulnerability to physical and transition risk and portfolio exposures and concentrations; and portfolio trends to evaluate changes in our exposure against these classifications.

In addition, we are enhancing climate risk monitoring within each risk type. Climate change and environmental risk considerations have been incorporated into new business development and, where relevant, transaction approvals. Our businesses now include a review of climate risks as part of their respective new product review processes, and the due diligence templates used by our compliance and operational risk, liquidity and capital risk and Corporate Treasury teams have been updated to include climate risk. Climate risk metrics are being integrated with our liquidity risk limits and metrics reporting process.

We continue to evolve the industry and country evaluation methodologies for climate risks and opportunities at an aggregate level, as well as for individual clients, which we expect will ultimately improve our risk monitoring abilities and provide real-time data for our FLUs in managing their risk. Key areas of focus for existing and future development of decision-useful climate risk metrics include providing granularity of underlying drivers to both transition and physical vulnerabilities.

## Risk Controls

We control climate-related risks by using the risk identification, measurement, and monitoring tools to drive governance, policies, processes, and testing efforts to manage and mitigate exposure to climate-related risk. Fundamental to that, we have incorporated climate considerations into our Risk Appetite Statement (RAS). Risk Appetite is foundational to how the Company controls for risk and is a key pillar of our Risk Framework. It indicates the amount of capital, earnings or liquidity we are willing to put at risk to achieve our strategic objectives and business plans, consistent with applicable regulatory requirements, and it is formally articulated in the RAS. The RAS includes both qualitative components and quantitative limits that are reviewed and approved by the Board at least annually.

We introduced climate risk into the enterprise RAS via a stand-alone climate risk narrative, a statement that summarizes how climate risk can manifest and span across the seven key risk types and incorporation into the Strategic Risk narrative.

In addition to our RAS, our ESRPF provides additional clarity and transparency related to how we approach environmental and social risks, including climate-related risks. The ESRPF identifies areas of heightened sensitivity for the Company such as biodiversity and ecosystems, impact of business related to energy, power, and extractives, human rights, indigenous peoples and other elements.

The designation of these areas of heightened sensitivity, as well as the previously mentioned industry and geography classifications, inform client engagement and due diligence processes. For instance, a client relationship or transaction may require enhanced due diligence if the client, business activity, industry or geography is deemed sufficiently sensitive. In these instances, enhanced due diligence is conducted before the relationship or transaction can proceed toward approval.

The enhanced due diligence process is tailored to provide a deeper analysis of risk issues for specific transactions or clients; thus, each analysis may vary somewhat. These analyses may include, but are not limited to, direct client discussion on related environmental and social risks, including climate-related risks, review of client disclosures, a comparison of the client's practices to those of industry peers, and consultation with and assessment by additional subject matter experts. Reviewed material may include regulatory filings, environmental and social impact reports and assessments, TCFD reporting, ESG and Corporate Social Responsibility (CSR) reports, and a media search that is focused on environmental and social reputation risk. Evaluation of environmental matters may include land and water use impacts, a remediation/reclamation track record (if applicable), climate risk reporting, community and stakeholder engagement and overall transparency. Evaluation of social issues may include a review of the client's relationship with relevant civil society organizations, and a particular focus on stakeholder engagement with local communities, including Indigenous Peoples and First Nations.

We recognize there are a range of risks associated with our current levels of fossil fuel financing, including reputation risk as negative perceptions of investors, clients, employees, and other stakeholders regarding our financing could adversely impact the Company. We have dramatically reduced exposure to companies focused on coal extraction, as evidenced by the fact that pure play coal extraction now only represents \$113 million or 0.01% of our total committed commercial credit exposure across all industries exposure, down more than 85% from \$762 million at FYE 2015. As stated in our ESRPF, by 2025 we will phase out all financing of companies deriving  $\geq 25\%$  of their revenue from thermal coal mining, unless the company has a public commitment to align its business (across Scope 1, 2 and 3 emissions) with the goals of the Paris Climate Agreement and the transaction would be facilitating the diversification of the company's business away from thermal coal.

As part of our enterprise climate strategy, we continue to closely monitor the evolving landscape and assess the appropriate metrics and limits for managing our exposure and performance.

To ensure we have appropriate controls across relevant risk categories, risk management policies across Credit, Market, Liquidity and Operational Risk have been updated to incorporate, where applicable, climate risks considerations.

## Highlights

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Since our 2020 TCFD Report, we have made sizable strides in expanding our targets and effectively measuring our progress toward them. This has included:

- Disclosing our financed emissions and emissions intensity baselines for the auto manufacturing, energy, and power generation sectors
- Disclosing progress toward our \$1.5 trillion by 2030 Sustainable Finance goal by LOB, including mobilizing and deploying over \$155 billion toward climate and environmental transition in 2021 (out of the total \$250 billion sustainable finance activity in 2021 that includes capital deployed for social inclusive development)
- Formalizing our commitment to the development and utilization of SAF and announcing a 2030 SAF Goal that includes multi-year partnerships with SkyNRG and American Airlines

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Bank of America has set a wide range of public operational and business targets aligned with its environmental and climate strategy. These targets are continually assessed through the appropriate governance routines and recalibrated as we respond to the urgency of climate change. Our ultimate goal is to align our business with the scientific consensus of what is needed to prevent global temperatures from rising more than 1.5° C.

To accomplish this goal we are tracking a number of different metrics. Our Net Zero Goal covers absolute emissions of our operations, supply chain and financing activities. With the exception of GHG emissions related to investments and other financing, we have historically reported in our [ESG Performance Data Summary](#) (including our most recent report for 2021) on all Scope 1, Scope 2 and Scope 3 emissions that are relevant to the Company. In this report, for the first time we have quantified emissions related to investments and other financing (“financed emissions”) based on the PCAF standard.

We publish our ESG metrics, including climate and emissions-related data, each year in our Annual Report to Shareholders and ESG Performance Data Summary following the International Business Council’s Stakeholder Capitalism Metrics guidance and GHG Protocol. The environmental metrics we disclose follow internal review, controls and governance and undergo third-party verification each year. Our financed emissions and emissions intensity calculations disclosed herein were subject to multiple levels of review, including Model Risk Management review, challenge and validation. Our Scope 1 and Scope 2 emissions data undergo a third-party reasonable assurance review, while all categories of Scope 3 emissions data, including our disclosed financed emissions, undergo a third-party limited assurance review.

While we are disclosing financed emissions for auto manufacturing, energy and power generation in this report, we intend to disclose the financed emissions for other sectors in future years and continue to implement the other PCAF asset class standards in the future.

We are committed to reporting each year following the requirements of regulators and PCAF, NZBA UNEP FI and TCFD guidelines.

## Operations and Supply Chain Metrics

The table below presents Bank of America's GHG emissions data for 2010 (the baseline) as well as the three most current years of data, covering Scopes 1, 2 and 3 emissions. Our inventory uses the methodology established by the GHG Protocol and guidance from the U.S. Environmental Protection Agency. More detailed information regarding our environmental goal performance, including GHG emissions, can be found in our [ESG Performance Data Summary](#).

Greenhouse Gas Emissions <sup>25,26,27</sup>	Units	2010 (baseline)	2019	2020	2021
<b>Scope 1 and Location-Based Scope 2 Emissions</b>					
Scope 1 Direct Emissions	Metric Tons CO <sub>2</sub> e	106,870	62,639	53,390	57,076
Location-Based Scope 2 Indirect Emissions	Metric Tons CO <sub>2</sub> e	1,678,547	722,188	650,553	601,906
Total Scope 1 and Location-Based Scope 2 Emissions	Metric Tons CO <sub>2</sub> e	1,785,417	784,826	703,943	658,982
Reduction in Total Scope 1 and Location-Based Scope 2 Emissions	Percent decrease from base year	N/A	56%	61%	63%
<b>Scope 1 and Market-Based Scope 2 Emissions</b>					
Scope 1 Direct Emissions	Metric tons CO <sub>2</sub> e	106,870	62,639	53,390	57,076
Market-Based Scope 2 Indirect Emissions	Metric tons CO <sub>2</sub> e	1,644,068	17,520	7,645	13,886
Total Gross Scope 1 and Market-Based Scope 2 Emissions	Metric tons CO <sub>2</sub> e	1,750,939	80,159	61,035	70,963
Carbon Offsets Retirement	Metric tons CO <sub>2</sub> e	0	80,159	61,035	70,963
Total Net Scope 1 and Market-Based Scope 2 Emissions	Metric tons CO <sub>2</sub> e	1,750,930	0	0	0
Reduction in Total Net Scope 1 and Market-Based Scope 2 Emissions	Percent decrease from base year	N/A	100%	100%	100%
<b>Scope 3 Indirect Emissions</b>					
Category 1 - Purchased Goods	Metric tons CO <sub>2</sub> e	Not Available	1,864,660	1,613,395	1,436,100
Category 2 - Capital Goods	Metric tons CO <sub>2</sub> e	Not Available	122,210	86,252	46,183
Category 3 - Fuel And Energy Related Activities	Metric tons CO <sub>2</sub> e	325,236	143,002	123,011	141,748
Category 4 - Upstream Transportation And Distribution	Metric tons CO <sub>2</sub> e	243,881	140,215	116,149	124,780
Category 5 - Waste (Traditional Disposal)	Metric tons CO <sub>2</sub> e	Not Available	22,326	15,850	11,757
Category 6 - Business Travel	Metric tons CO <sub>2</sub> e	195,126	161,748	31,481	18,822
- Business Travel Carbon Offsets Retirement	Metric tons CO <sub>2</sub> e	0	0	31,482	18,823
- Total Net Scope 3 Business Travel Emissions	Metric tons CO <sub>2</sub> e	195,126	161,748	0	0
Category 7 - Employee Commuting	Metric tons CO <sub>2</sub> e	675,193	378,088	126,066	144,625
Category 8 - Upstream Leased Assets	Metric tons CO <sub>2</sub> e	Not Relevant	Not Relevant	Not Relevant	Not Relevant
Category 9 - Downstream Transportation and Distribution	Metric tons CO <sub>2</sub> e		1,400,000	1,200,000	1,000,000
Category 10 - Processing of Sold Products	Metric tons CO <sub>2</sub> e	Not Relevant	Not Relevant	Not Relevant	Not Relevant
Category 11 - Use of Sold Products	Metric tons CO <sub>2</sub> e		4,000	3,000	3,000
Category 12 - End of Life Treatment of Sold Products	Metric tons CO <sub>2</sub> e		16,000	12,000	9,000
Category 13 - Downstream Leased Assets	Metric tons CO <sub>2</sub> e	Not Relevant	Not Relevant	Not Relevant	Not Relevant
Category 14 - Franchises	Metric tons CO <sub>2</sub> e	Not Relevant	Not Relevant	Not Relevant	Not Relevant
Category 15 - Investments <sup>28</sup>	Metric tons CO <sub>2</sub> e				

<sup>25</sup> Third party verification and assurance is performed on this data and can be viewed here: [https://about.bankofamerica.com/content/dam/about/pdfs/Bank\\_of\\_America\\_2021\\_Assurance\\_Statement\\_ISAE\\_3000\\_Final.pdf](https://about.bankofamerica.com/content/dam/about/pdfs/Bank_of_America_2021_Assurance_Statement_ISAE_3000_Final.pdf)

<sup>26</sup> In accordance with the GHG Protocol, some prior year emissions are restated, being recalculated back to the base year when there is a change in prior periods that results in a change to previously reported emissions of 0.5% or greater. Therefore, prior year emissions presented in this report may differ from those published previously, including in the ESG Performance Data Summary and the 2021 Annual Report to Shareholders, Stakeholder Capitalism Metrics section. Changes in prior inventories primarily arise from changes in calculation methodologies and could also include data corrections.

<sup>27</sup> CO<sub>2</sub>e = carbon dioxide equivalent.

<sup>28</sup> Relevant financed emissions figures are detailed later in this section.



In 2022, we were the first global financial institution to announce goals related to the financing and usage of sustainable aviation fuel (SAF), to be achieved by 2030. To reach these goals, Bank of America expects to work with aviation fuel suppliers and related ecosystem participants to increase production and support the development of the necessary infrastructure for users to access SAF. The goals are included below and reporting on progress toward the goals will begin in 2023. More information about the SAF goals and associated partnerships can be found in the [February 2022 press release](#). A description of the methodologies used to calculate the environmental data below can be found in the [ESG Performance Data Summary](#).

Goal (2010 Baseline)	Units	2019	2020	2021	2030 Target
<b>Greenhouse Gases/Energy</b>					
Maintain carbon neutrality for operations (Scope 1 and 2)	% reduction	100%	100%	100%	Carbon Neutral
Reduce location-based GHG emissions by 75% (Scope 1 and 2)	% reduction	56%	61%	63%	75%
Reduce energy use	% reduction	42%	45%	47%	55%
Purchase electricity from zero carbon sources	% reduction	107%	109%	101%	100%
<b>Green Building</b>					
LEED certification (or comparable) in owned and leased space	% certified	25%	24%	25%	40%
<b>Water</b>					
Reduce potable water use	% reduction	45%	50%	53%	55%
<b>Waste (2011 Baseline)</b>					
Divert construction and demolition waste from the landfill	% reduction	63%	70%	73%	75%
Dispose of electronic waste using certified responsible suppliers	% disposed	100%	100%	100%	100%
<b>Paper</b>					
Paper from certified sources	% from certified sources	99.3%	99.3%	98.6%	100%
<b>Supplier Engagement</b>					
Assessment of global suppliers, by current year spend, for ESG risks as outlined by the company's Vendor Code of Conduct	% of spend	-	-	63%	90%
Ensure global suppliers, by spend*, set GHG emissions reduction or renewable energy targets (*assessed against previous year spend)	% of spend	44%	59%	61%	70%
<b>Sustainable Aviation Fuel (SAF)</b>					
Mobilize \$2 billion in sustainable finance for the production of SAF and other low carbon aviation solutions	\$ USD in billions	-	-		2
Support production and use of one billion gallons of SAF by 2030	# of gallons in billions	N/A	N/A		1
Utilize SAF for at least 20% of total annual corporate and commercial jet fuel usage	% of jet fuel usage	-	-		20%

## Financed Emissions and 2030 Financing Activity Targets

We have calculated our baseline (2019) and latest available (2020) emissions for our auto manufacturing, energy and power generation portfolios according to the PCAF methodology. 2019 serves as our baseline year for financed emissions with regard to the 2030 Financing Activity Targets and our Net Zero Goal.

It should be noted that calculating financed emissions is a new and evolving landscape and we expect there to be meaningful improvements to data capture, data sourcing and estimation methodologies over time. As a result, there may be significant volatility in year-over-year numbers and potential restatements of historical results. These potential restatements could be driven by enhancements in reporting by our clients, volatility in market value impacting EVIC, corporate actions (e.g., mergers and acquisitions), revisions to data sources and updates to estimation methodologies and emission estimation factors as better sources of data are identified.

As an example, our calculations use best available emissions and production information and utilized exposures may vary between clients who are reporting and clients for whom we have to estimate. As regulations are adopted and more companies begin to report emissions data, some clients report emissions and production information for those previous years, which could impact our calculations for previous years and year-over-year results.

As previously discussed, another challenge we recognize related to our financed emissions reporting is that a drop in enterprise value for a public client could result in an increase in attributed emissions without any change in our financing activity or the client's emissions, impacting year-over-year results. While we work with PCAF on potential solutions to this challenge, we likely will include commentary in future reporting to provide transparency to the data impacts of these dynamics.

We are working on an internal framework to clarify requirements for restatements, modifications of baselines, and/or commentary needed in future disclosures.

### 2019 and 2020 Absolute Financed Emissions and Economic Intensities

		Auto Manufacturing	Energy - Oil & Gas Producers and Refiners	Energy - Other <sup>29</sup>	Power Generation Scope 1 Only	Grand Total
<b>Loans Covered</b>						
Utilized (in millions)	2019	1,747	7,544	5,547	5,932	20,770
	2020	1,522	5,957	4,302	6,566	18,347
<b>Financed Emissions</b>						
Scope 1 + Scope 2 Financed Emissions (thousands tCO <sub>2</sub> e)	2019	58	2,595	2,719	6,994	12,366
	2020	29	2,187	1,899	8,592	12,707
Scope 3 Financed Emissions (thousands tCO <sub>2</sub> e)	2019	2,988	32,096	1,977		37,061
	2020	1,729	30,425	2,449		34,603
<b>Total Financed Emissions (thousands tCO<sub>2</sub>e)</b>	<b>2019</b>	<b>3,046</b>	<b>34,691</b>	<b>4,696</b>	<b>6,994</b>	<b>49,427</b>
	<b>2020</b>	<b>1,758</b>	<b>32,612</b>	<b>4,348</b>	<b>8,592</b>	<b>47,310</b>
<b>Economic Intensities<sup>30</sup></b>						
Economic Intensity (tCO <sub>2</sub> e/millions)	2019	1,743	4,599	847	1,179	
	2020	1,155	5,475	1,011	1,309	

<sup>29</sup> Other includes Scope 1 and 2 for midstream and downstream oil and gas companies and Scope 3 for thermal coal mining companies.

<sup>30</sup> Economic emissions intensity is the absolute emissions divided by the loan exposure, which is expressed here as tCO<sub>2</sub>e/millions \$ loaned.

Our 2030 Financing Activity Targets are based on our committed commercial credit exposure and the most material emissions for each sector. Details are shown below:

### Physical Intensity and Intensity Targets

	Emission Scope Included	Intensity Metric	2019	2020	2030 Targets	
Auto Manufacturing	Scope 1, 2 & 3	g CO <sub>2</sub> e/km	169.4	164.1	44% reduction from 2019 to 2030	94.9
Energy	Scope 1 and 2	g CO <sub>2</sub> e/MJ	7.1	6.5	42% reduction from 2019 to 2030	4.1
	Scope 3	g CO <sub>2</sub> /MJ	60.6	60.5	29% reduction from 2019 to 2030	43.1
Power Generation	Scope 1	kg CO <sub>2</sub> /MWh	336.4	367.2	70% reduction from 2019 to 2030	100.9

*Note: The increase in 2020 Power Generation Weighted Average Physical Unit Intensity was primarily driven by the roll-off of a single short-term financing entered into under unique circumstances. The roll-off changed the overall weighting of loans in the 2020 portfolio, giving greater weight to clients with higher emission intensities.*

### Sustainable Finance Targets and Progress

As discussed above, one of the ways we are attempting to reduce transition-related risk in our portfolios is by increasing the flow of capital to low-carbon technologies and activities. In April 2021, the company announced a \$1 trillion by 2030 goal to mobilize and deploy capital to accelerate the environmental transition, as part of its \$1.5 trillion sustainable finance commitment to support the UN SDGs. In 2021, Bank of America mobilized and deployed approximately \$250 billion in sustainable finance activity, of which more than \$155 billion was for climate and environmental transition. Since 2007, Bank of America has mobilized and deployed more than \$350 billion toward climate and environment-related business activities. Our financing has driven development and increased deployment of energy efficiency, renewable energy, sustainable transportation, water conservation and sustainable land use.

Segmentation	Environmental Transition (\$ MM)	Inclusive Social Development (\$ MM)	Total 2021 Activity (\$ MM)
Global Corporate and Investment Bank: Advisory, lending, leasing and capital markets activity for clients and activity aligned with the SDGs	109,804	48,904	158,708
Global Markets: Capital markets advisory, underwriting and distribution for municipal and corporate clients and activity aligned with the SDGs	28,727	19,328	48,055
Global Commercial Banking: Advisory, lending, leasing and capital markets activity for clients and activity aligned with the SDGs	1,997	9,725	11,722
Business Banking: Lending to clients aligned with the SDGs	12	238	250
Retail and Preferred: Hybrid and electric vehicle lending and LMI lending for homeownership and small business	1,127	7,395	8,522
Merrill and Private Bank: Increase in client assets with a clearly defined ESG investment approach	12,531	6,265	18,796
All Other	3,126	2,484	5,610
Total	157,324	94,339	251,663

# Conclusion

Since the publication of our first TCFD report in April 2020, we have taken vital steps to further establish our role as a leader in the transition to a Net Zero economy. Despite the significant progress we have made in building out a comprehensive and integrated climate strategy, there remain considerable challenges and opportunities on the horizon. Going forward we will work to address the critical areas that remain to strengthen our resilience, effectiveness and credibility as a climate leader.

Most essential in our path forward is leveraging every tool we have to reach our Net Zero Goal. In addition to the interim financed emissions targets we have set for the energy, power generation and auto manufacturing sectors, we will be working to set interim targets for other key high-emitting sectors over the next year. To enable successful execution against our Net Zero targets, we plan to build out a multifaceted strategy to manage toward these interim goals and our larger Net Zero Goal. Our course of action will include enhancing our governance and controls as well as our internal systems, data infrastructure and reporting mechanisms for Net Zero and other climate-related efforts. This will not only improve transparency and efficacy, but will also facilitate compliance with increasing regulatory requirements. Moreover, we intend to continue our enhancements of policies and procedures, specifically for high-emitting sectors, to responsibly manage climate-related risks and have a clear line to reach our targets.

A foundational step in driving the collaboration necessary for an actionable environmental and climate strategy is educating and driving awareness among our employees and our clients. This includes equipping our FLUs with the right tools and knowledge to meaningfully engage our clients on their Net Zero transition plans. Over the next year and beyond, we plan to deploy capital to assist our clients in their transitions to Net Zero as part of our \$1.5 trillion sustainable finance goal, and continue to prepare our bankers to serve as critical sources of expertise.

Reaching Net Zero and accounting for climate-related risks and opportunities extends far beyond Bank of America and our clients. Achieving a sustainable future can only happen when the private and public sectors make concerted advancements. We will continue to collaborate with our peers and industry associations to advocate for the change that is needed in the public policy domain and beyond.

While we understand the climate crisis poses formidable complexities and challenges, we assume an earnest responsibility to harness the associated opportunities to drive Responsible Growth and invest in a sustainable path forward. We will take the year ahead to continue charting this path with our clients.

# Appendix 1 – Key Partnerships

## 1t.org

### Partner

Facilitates the leadership of U.S. companies, nonprofits, governments and individuals to reach a goal of conserving, restoring and growing one trillion trees globally by 2030.



## Bank Policy Institute

### Member

Nonpartisan public policy, research and advocacy group, representing the nation's leading banks.



## Breakthrough Energy Catalyst

### Founding Partner

Network of entities and initiatives, founded by Bill Gates, to accelerate the development of the climate-smart technologies necessary to achieve Net Zero emissions by 2050. Bank of America was one of the organization's first private sector partners when we invested in 2021.



## Business Roundtable

### Member

Association comprising chief executive officers of America's leading companies working to promote a thriving U.S. economy and expanded opportunity for all Americans through sound public policy.



## Center for Climate and Energy Solutions (C2ES)

### Business Environmental Leadership Council Member

Environmental non-profit focused on advancing strong policy and ambitious action to meet critical climate and energy challenges. Bank of America serves with 40 other companies on C2ES's Business Environmental Leadership Council – the largest U.S.-based association of companies devoted to climate-related policy and corporate strategies.



## Ceres

### Member

Advances leadership among investors, companies and capital market influencers to drive solutions and take action on the world's most pressing sustainability issues.



## Clean Air Task Force

### Partner

Working to safeguard against the worst impacts of climate change by catalyzing the rapid global development and deployment of low-carbon energy and other climate-protecting technologies.



## Clean Hydrogen Economy Consortium

### Member

Consortium led by Guidehouse, driving clean hydrogen pilot projects for heavy transport, renewables integration and industrial applications.



## Clean Skies for Tomorrow Coalition

### Member

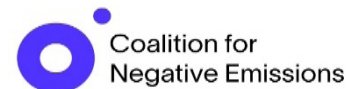
Accelerates the supply and use of sustainable aviation fuel to reach 10% of global jet aviation fuel supply by 2030.



## Coalition for Negative Emissions

### Member

Coalitions of investors and trade associations providing policymakers, NGOs and other key stakeholders with a platform to advance global action to rapidly deploy negative emissions solutions.



## Energy Transition Commission

### Commissioner

Bank of America serves as a commissioner along with other leaders from across the energy landscape that committed to achieving Net Zero. The Commission is a global coalition of leaders from across the energy landscape working together to accelerate the transition to a zero-emissions future, emissions in line with the Paris climate objective.



## First Movers Coalition

### Founding Member

Mobilizes collective demand for critical emerging technologies essential for the Net Zero transition.





# Glasgow Financial Alliance for Net Zero

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## Principals Group Member

Brings together the financial sector to accelerate the transition to a Net Zero economy.



# The Global Financial Markets Association (GFMA)

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## Global Financial Markets Association Board Member

Represents the common interests of the world's leading financial and capital market participants, to provide a collective voice on matters that support global capital markets.



# The Global Investors for Sustainable Development Alliance

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## Founding Member

Alliance of leaders from major financial institutions seeking to deliver concrete solutions to scale-up long-term finance and investment in sustainable development.



# Institute of International Finance

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## Member

Global association of the financial industry, with more than 450 members from more than 70 countries. Its mission is to support the financial industry in the prudent management of risks; to develop sound industry practices; and to advocate for regulatory, financial and economic policies that are in the broad interests of its members and foster global financial stability and sustainable economic growth.



# International Business Council

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## International Business Council Chair

Brings together top-level leaders from all over the world in order to discuss and examine global political and economic issues.



# Mission Possible Partnership

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## Member

Mission Possible Partnership (MPP) is an alliance of climate leaders focused on supercharging decarbonization across the entire value chain of the world's highest-emitting industries in the next 10 years.



# Natural Climate Solutions Investment Accelerator

## Investment Accelerator Founding Member

Drives and aggregates corporate demand for 1 gigaton of CO<sub>2</sub>e emissions through reductions and removals per year by 2025.



# Net-Zero Banking Alliance (NZBA)

## Founding Signatory

Industry-led, United Nations-convened alliance of banks committed to aligning their lending and investments with net zero emissions by 2050. Bank of America was among the first group of banks to join the NZBA, part of the Glasgow Financial Alliance for Net Zero (GFANZ), which requires financial institutions to set science-aligned interim and long-term goals.



# Partnership for Carbon Accounting Financials (PCAF)

## Global Core Team Member

Global partnership of more than 300 financial institutions to develop a consistent methodology to assess and disclose financed emissions. In collaboration with 15 other financial institutions, Bank of America helped develop the Global GHG Accounting and Reporting Standard for the Financial Industry.



# Risk Management Association's Climate Risk Consortium

## Founding Member

Focused on advancing best practices in climate risk management within the financial services industry.



# RMI's Center for Climate Aligned Finance

## Founding Partner

Launched in 2020 by RMI to support the financial sector's role in transitioning the global economy toward a zero-carbon, 1.5°C future.



# Stanford Strategic Energy Alliance

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## Founding Member

Academic-private sector program established by Stanford University's Precourt Institute for Energy focused on accelerating the pace of this transformation involving clean energy development, deployment, scale-up, and finance.

Stanford Energy  
Strategic Energy Alliance

# Sustainable Markets Initiative (SMI)

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## Co-chair, Signatory to the SMI Terra Carta

Founded by His Majesty King Charles III to lead and accelerate the world's transition to a sustainable future. Bank of America CEO Brian Moynihan serves as co-chair of the SMI, and, at COP26 we were recognized by SMI with the Terra Carta Seal for far-reaching efforts to help the world transition to a low-carbon economy. As part of the Financial Services Task Force, Bank of America helped launch the [Net Zero Practitioner's Guide](#) to support the banking industries implementation of net zero commitments.



# U.S. Chamber of Commerce

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## Member

Organization with members ranging from the small businesses and chambers of commerce across the country that support their communities, to the leading industry associations and global corporations that innovate and solve for the world's challenges, to the emerging and fast-growing industries that are shaping the future.



# World Economic Forum Alliance of CEO Climate Leaders

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## Member

Group of Chief Executive Officers who continue to set the bar higher and catalyze action across all sectors and engage policymakers to help deliver the transition to a Net Zero economy.



# World Resources Institute's Corporate Consultative Group (CCG)

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## Member

Brings together over 30 global companies to advance business practices that mitigate climate risks and support sustainable growth. WRI is a global nonprofit organization that works with leaders in government, business and civil society to research, design, and carry out practical solutions that simultaneously improve people's lives and ensure nature can thrive.



# Appendix 2 – Financed Emissions and Sector Intensity Calculation Methodology

## Financed Emissions Methodology

In July 2020, Bank of America committed to measure and disclose our financed emissions based on the PCAF standard methodology. Our approach to calculating financed emissions for each commercial loan is aligned with the PCAF standard calculation approach for Business Loans:

### Private Companies:

$$\sum_C \frac{\text{Outstanding Amount}_c}{\text{Total Equity + Debt}_c} \times \text{Client Emissions}_c$$

(with  $c$  = borrower)

### Listed Companies:

$$\sum_C \frac{\text{Outstanding Amount}_c}{\text{Enterprise Value Including Cash (EVIC)}_c} \times \text{Client Emissions}_c$$

### Private and Listed Companies included in calculations:

Our financed emissions calculations include business loans (as defined by the PCAF Standard) to clients in Global Banking and Global Markets portfolios within the auto manufacturing, energy and power generation sectors. These calculations also include clients in our government sector portfolio who generate power as well as clients in other sectors who are auto manufacturing, energy or power generation entities (e.g., a subsidiary that generates power under a General Industrials parent entity will be included in our power generation calculation).

Capital markets activity, structured products (such as derivatives, hedging or trading), alternative energy projects and tax equity-financed projects are excluded from our calculations at this time. We intend to incorporate facilitated emissions associated with capital markets activity after the methodology is released by PCAF. Bank of America is a member of the Capital Markets Working Group within PCAF assisting in the development of this standard. We also intend to incorporate renewable energy project financing into our calculations.

### Financial reporting period and client loan exposure:

The financial reporting year is January 1 to December 31 for the years 2019 and 2020. Financial values related to client loan exposure and company financials have been aligned to these year-end dates as much as possible for each year, or we have taken information from the company's closest financial reporting year-end date. Per the PCAF standard, our financed emissions calculations are based on utilized exposure, i.e., the value of the loan that the borrower has drawn down as of the year-end date.

### **Data sources and emissions estimations:**

Financial information such as client equity and debt, enterprise value including cash (EVIC), revenue and production information are sourced from client reports either publicly disclosed or provided to Bank of America.

Emissions are sourced from:

- Reported client emissions as sourced through S&P Global Trucost, MSCI or ERM
- Reported client or site emissions from publicly available databases (such as the EPA16 or CDP) and/or company disclosures
- S&P Global Trucost, MSCI or ERM estimations based on reported company data or their proprietary estimation model

Where financial information is available, but the client does not disclose emissions, we use a revenue emissions factor (sourced from S&P Global Trucost and based on sectoral GHG emissions/revenue) to estimate client emissions and attribute emissions as stated above. Where financial information is not available for clients, we have applied an industry average emissions intensity factor (as available through the PCAF emissions factor database), based on the company's primary North American Industry Classification System (NAICS) code, to the available loan information for the client.

### **Emissions Scopes included:**

Our calculations include the most material emissions for each sector and sub-sector, with industry classifications based on NAICS codes aligned with other external reporting.

### **Auto Manufacturing**

Auto manufacturing classification generally aligns with the Company classification of automobiles and include light duty passenger car and truck manufacturers.

Scope 1, 2 and 3 end use GHG emissions are included in the calculations for all clients. FY2019 and FY2020 Scope 3 end use emissions financed emissions were calculated using client-reported Scope 3.11 emissions where available. Where possible, we selected tank-to-wheel emissions specifically. Where Scope 3.11 emissions were not available for either year, we used company-reported revenue or production information to estimate emissions as indicated above.

### **Energy**

Energy calculations include all NAICS codes from the internal Company classification of energy, with the exception of the sub-sector pipeline transportation of natural gas, which is currently in our utilities portfolio but was included in the energy calculations.

Scope 1 and 2 GHG emissions are included for all energy clients, while Scope 3 is included only for the upstream producers, refiners and integrated companies within the oil and gas sub-sector, as well as coal mining companies. We chose those sub[1] sectors based on relevance and data availability as they represent the majority of emissions within the sector and are the only sub-sectors that report oil and gas production details for use in estimating Scope 3 end use emissions.

While some energy companies do report Scope 3 end use GHG emissions, to achieve a consistent and harmonized approach for all oil and gas producers, refiners, and integrated companies, FY2019 and FY2020 Scope 3 end use emissions were calculated using client production data and emissions factors.

We were able to source production information for 75% (2019) and 82% (2020) of clients in the production, refining, and integrated sub-sectors. Where production information was not available, we used client-reported revenue and the Scope 3 downstream emissions factor to estimate Scope 3 emissions, as indicated above.

### **Power Generation**

Power generation calculations generally align with the Company classification of utilities, with some exceptions: water, sewage and steam and air conditioning utilities are excluded, while municipal power utilities that are in the Company classification of Government are included. The power generation calculations only include the Scope 1 carbon emissions from clients that generate power, as these emissions are the most relevant and material for this sector.

## Data challenges regarding timing of emissions availability

Due to an inherent lag in public GHG accounting and reporting by clients, 2019 loan information is calculated with reported actual sales and estimates based on 2019 client emissions information. Similarly, 2020 loan information is calculated with 2020 client emissions information. Where client emissions information was not available for the same year as loan information, we used the best available emissions information. However, to provide consistent year-over-year comparison, we did not disclose 2021 financed emissions calculations as we do not yet have 2021 emissions or production information. This type of data lag is common for financed emissions calculations and reporting. We plan to disclose 2021 financed emissions in 2023, following the PCAF standard principle of using best available data.

## Sector Intensity Calculation Methodology

Sectoral emissions intensity metrics were calculated for our loans in the auto manufacturing, energy and power generation sectors.

### Auto Manufacturing

For auto manufacturing, emissions intensity is defined as grams of CO<sub>2</sub>e emitted per kilometer traveled for vehicles sold in the reporting period (gCO<sub>2</sub>e/KM):

$$\text{Company Intensity} = \frac{\text{Auto Manufacturing Company Scope 1, 2 and 3 end use CO}_2\text{e emissions (g)}}{\text{Lifetime kilometers traveled for vehicles sold in reporting period}}$$

FY2019 and FY2020 emissions and production information were sourced primarily from company filings. Portfolio-level intensity was calculated as the sum of parent-company emissions intensities, weighted by the parent-level committed exposure as a percentage of total portfolio-level committed exposure.

$$\text{Weighted Average Physical Unit Intensity} = \sum \left( \frac{\text{Client Emissions}}{\text{Client Production}} \times \frac{\text{Client Financing}}{\text{Total Sector Financing}} \right)$$

### Energy

For energy, emissions intensity is defined as grams of CO<sub>2</sub>e emitted for each MJ produced (gCO<sub>2</sub>e/MJ):

$$\text{Company Scope 1 and 2 Intensity} = \frac{\text{Energy Company Scope 1 and 2 CO}_2\text{e emissions (g)}}{\text{MJ of energy produced}}$$

$$\text{Company Scope 3 Intensity} = \frac{\text{Energy Company Scope 3 CO}_2\text{ emissions (g)}}{\text{MJ of energy produced}}$$

FY 2019 and FY 2020 production information was sourced primarily from company filings, while emissions were calculated as indicated above within the financed emissions model.

Similar to auto manufacturing, the energy portfolio-level intensity was calculated as the sum of parent-company emissions intensities, weighted by the parent-level committed exposure as a percentage of total portfolio-level committed exposure.

$$\text{Weighted Average Physical Unit Intensity} = \sum \left( \frac{\text{Client Emissions}}{\text{Client Production}} \times \frac{\text{Client Financing}}{\text{Total Sector Financing}} \right)$$

### Power Generation

The power generation portfolio intensity metric is inclusive of our commercial loans solely to power generating entities. Emissions intensity is defined as kilograms of CO<sub>2</sub> emitted for each megawatt hour (MWh) produced (kgCO<sub>2</sub>/MWh) for each company:

$$\text{Company Intensity} = \frac{\text{Company Scope 1 CO}_2\text{ emissions (kg)}}{\text{Generation (MWh)}}$$

FY2019 and FY2020 emissions and electricity generation information were sourced from ERM. Portfolio-level intensity was calculated as the sum of parent-company emissions intensities, weighted by the parent-level committed exposure as a percentage of total portfolio-level committed exposure.

$$\text{Weighted Average Physical Unit Intensity} = \sum \left( \frac{\text{Client Emissions}}{\text{Client Production}} \times \frac{\text{Client Financing}}{\text{Total Sector Financing}} \right)$$



# Appendix 3 – Financed Emissions Verification Statement

## Verification Opinion Declaration Greenhouse Gas Emissions (2019)

To: The Stakeholders of Bank of America

Apex Companies, LLC (Apex) was engaged to conduct an independent verification of the greenhouse gas (GHG) emissions reported by Bank of America for the period stated below. This verification opinion declaration applies to the related information included within the scope of work described below.

The determination of the GHG emissions is the sole responsibility of Bank of America. Bank of America is responsible for the preparation and fair presentation of the GHG emissions statement in accordance with the criteria. Apex's sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, and on the underlying systems and processes used to collect, analyze and review the information. Apex is responsible for expressing an opinion on the GHG emissions statement based on the verification.

### Boundaries of the reporting company GHG emissions covered by the verification:

- Operational Control
- Financed Emissions (Auto Manufacturing, Energy and Power Generation Sectors utilized amounts only)

### Type of GHGs:

- CO<sub>2</sub>
- N<sub>2</sub>O
- CH<sub>4</sub>
- Refrigerants

### GHG Emissions Statement:

- Scope 3 – Investments:

Category	Units	Utilized
Absolute Total Financed Emissions (Auto Manufacturing, Energy, Power Generation)	Thousand Metric tons CO <sub>2</sub> e	49,427
Absolute Total Financed Emissions (Auto Manufacturing)	Thousand Metric tons CO <sub>2</sub> e	3,046
Absolute Total Financed Emissions (Energy - Oil & Gas Refiners and Producers includes Scope 1, Scope 2 and Scope 3)	Thousand Metric tons CO <sub>2</sub> e	34,691
Absolute Total Financed Emissions (Energy - Other includes Scope 1 and Scope 2)	Thousand Metric tons CO <sub>2</sub> e	4,696
Absolute Total Financed Emissions (Power Generation - Scope 1 only)	Thousand Metric tons CO <sub>2</sub> e	6,994
Economic Intensity (Auto Manufacturing)	Metric tons CO <sub>2</sub> e /Million USD exposure	1,743
Economic Intensity (Energy - Oil & Gas Refiners and Producers includes Scope 1, Scope 2 and Scope 3)	Metric tons CO <sub>2</sub> e /Million USD exposure	4,599
Economic Intensity (Energy – Other includes Scope 1, Scope 2 and Scope 3)	Metric tons CO <sub>2</sub> e /Million USD exposure	847
Economic Intensity (Power Generation - Scope 1 only)	Metric tons CO <sub>2</sub> e /Million USD exposure	1,179

Category	Units	Utilized
Physical Intensity (Auto Manufacturing)	g CO <sub>2</sub> e/km	169.4
Physical Intensity (Energy – Other does not include Scope 3)	g CO <sub>2</sub> e/MJ	7.1
Physical Intensity (Energy – Oil & Gas Refiners and Producers includes Scope 3)	g CO <sub>2</sub> /MJ	60.6
Physical Intensity (Power Generation – Scope 1 only)	kg CO <sub>2</sub> /MWh	336.4

Data and information supporting the Scope 3 GHG emissions statement were in some cases estimated rather than historical in nature.

**Period covered by GHG emissions verification:**

- January 1, 2019 to December 31, 2019

**Criteria against which verification was conducted:**

- WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard (Scope 3)
- Partnership for Carbon Accounting Financials (PCAF) Global GHG Accounting & Reporting Standard for the Financial Industry
- Bank of America's Internal Protocol for calculating Financed Emissions

**Reference Standard:**

- ISO 14064-3 Second edition 2019-04: Greenhouse gases -- Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

**Level of Assurance and Qualifications:**

- Limited
- This verification used a materiality threshold of  $\pm 5\%$  for aggregate errors in sampled data for each of the above indicators

**GHG Verification Methodology:**

Evidence-gathering procedures included but were not limited to:

- Interviews with relevant personnel of Bank of America and their consultant;
- Review of documentary evidence produced by Bank of America;
- Review of Bank of America data and information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions; and
- Audit of a sample of data used by Bank of America to determine GHG emissions.

**Verification Opinion:**

Based on the process and procedures conducted, there is no evidence that the Scope 3 GHG emissions statement shown above:

- is not a fair representation of the GHG emissions data and information; and
- has not been prepared in accordance with the WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard (Scope 3).

It is our opinion that Bank of America has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of these GHG emissions for the stated period and boundaries.

### Statement of independence, impartiality and competence

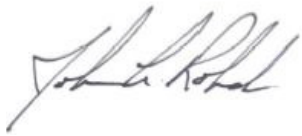
Apex is an independent professional services company that specializes in Health, Safety, Social and Environmental management services including assurance with over 30 years history in providing these services.

No member of the verification team has a business relationship with Bank of America, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has over 20 years combined experience in this field and an excellent understanding of Apex's standard methodology for the verification of greenhouse gas emissions data.

### Attestation:



John A. Rohde, Lead Verifier  
Program Manager  
Apex Companies, LLC



David Reilly, Technical Reviewer  
Senior Project Manager  
Apex Companies, LLC

August 12, 2022

*This verification opinion declaration, including the opinion expressed herein, is provided to Bank of America and is solely for the benefit of Bank of America in accordance with the terms of our agreement. We consent to the release of this declaration to the public or other organizations for reporting and/or disclosure purposes, without accepting or assuming any responsibility or liability on our part to any other party who may have access to this declaration.*

## Verification Opinion Declaration Greenhouse Gas Emissions (2020)

To: The Stakeholders of Bank of America

Apex Companies, LLC (Apex) was engaged to conduct an independent verification of the greenhouse gas (GHG) emissions reported by Bank of America for the period stated below. This verification opinion declaration applies to the related information included within the scope of work described below.

The determination of the GHG emissions is the sole responsibility of Bank of America. Bank of America is responsible for the preparation and fair presentation of the GHG emissions statement in accordance with the criteria. Apex's sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, and on the underlying systems and processes used to collect, analyze and review the information. Apex is responsible for expressing an opinion on the GHG emissions statement based on the verification.

### Boundaries of the reporting company GHG emissions covered by the verification:

- Operational Control
- Financed Emissions (Auto Manufacturing, Energy, and Power Generation Sectors utilized amounts only)

### Type of GHGs:

- CO<sub>2</sub>
- N<sub>2</sub>O
- CH<sub>4</sub>
- Refrigerants

### GHG Emissions Statement:

- Scope 3 – Investments:

Category	Units	Utilized
Absolute Total Financed Emissions (Auto Manufacturing, Energy, Power Generation)	Thousand Metric tons CO <sub>2</sub> e	47,310
Absolute Total Financed Emissions (Auto Manufacturing)	Thousand Metric tons CO <sub>2</sub> e	1,758
Absolute Total Financed Emissions (Energy - Oil & Gas Refiners and Producers includes Scope 1, Scope 2 and Scope 3)	Thousand Metric tons CO <sub>2</sub> e	32,612
Absolute Total Financed Emissions (Energy - Other includes Scope 1 and Scope 2)	Thousand Metric tons CO <sub>2</sub> e	4,348
Absolute Total Financed Emissions (Power Generation - Scope 1 only)	Thousand Metric tons CO <sub>2</sub> e	8,592
Economic Intensity (Auto Manufacturing)	Metric tons CO <sub>2</sub> e /Million USD exposure	1,155
Economic Intensity (Energy - Oil & Gas Refiners and Producers includes Scope 1, Scope 2 and Scope 3)	Metric tons CO <sub>2</sub> e /Million USD exposure	5,475
Economic Intensity (Energy – Other includes Scope 1, Scope 2 and Scope 3)	Metric tons CO <sub>2</sub> e /Million USD exposure	1,011
Economic Intensity (Power Generation - Scope 1 only)	Metric tons CO <sub>2</sub> e /Million USD exposure	1,309

Category	Units	Utilized
Physical Intensity (Auto Manufacturing)	g CO <sub>2</sub> e/km	164.1
Physical Intensity (Energy – Other does not include Scope 3)	g CO <sub>2</sub> e/MJ	6.5
Physical Intensity (Energy – Oil & Gas Refiners and Producers includes Scope 3)	g CO <sub>2</sub> /MJ	60.5
Physical Intensity (Power Generation – Scope 1 only)	kg CO <sub>2</sub> /MWh	367.2

Data and information supporting the Scope 3 GHG emissions statement were in some cases estimated rather than historical in nature.

**Period covered by GHG emissions verification:**

- January 1, 2020 to December 31, 2020

**Criteria against which verification was conducted:**

- WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard (Scope 3)
- Partnership for Carbon Accounting Financials (PCAF) Global GHG Accounting & Reporting Standard for the Financial Industry
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**Reference Standard:**

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**Level of Assurance and Qualifications:**

- Limited
- This verification used a materiality threshold of  $\pm 5\%$  for aggregate errors in sampled data for each of the above indicators

**GHG Verification Methodology:**

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- Interviews with relevant personnel of Bank of America and their consultant;
- Review of documentary evidence produced by Bank of America;
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- Audit of a sample of data used by Bank of America to determine GHG emissions.

**Verification Opinion:**

Based on the process and procedures conducted, there is no evidence that the Scope 3 GHG emissions statement shown above:

- is not a fair representation of the GHG emissions data and information; and
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It is our opinion that Bank of America has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of these GHG emissions for the stated period and boundaries.

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John A. Rohde, Lead Verifier  
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August 12, 2022

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## Appendix 4 – Disclaimers

The information contained in this report is for informational purposes only, is not intended to be comprehensive and does not constitute investment, financial, economic, accounting, legal or tax advice or recommendations. Additionally, such information is not a product of any research affiliate or division of Bank of America Corporation, and has not been reviewed, endorsed or otherwise approved by any such research unit. Any views or opinions expressed herein may differ from the views and opinions of other departments or divisions of Bank of America Corporation and its affiliates. Neither Bank of America Corporation nor any of its affiliates, directors, officers, employees or agents shall incur any responsibility or liability whatsoever to any person or entity with respect to the contents of, use of, or reliance upon any matters referred to in this report.

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