

#SUSTAINABLE FINANCE

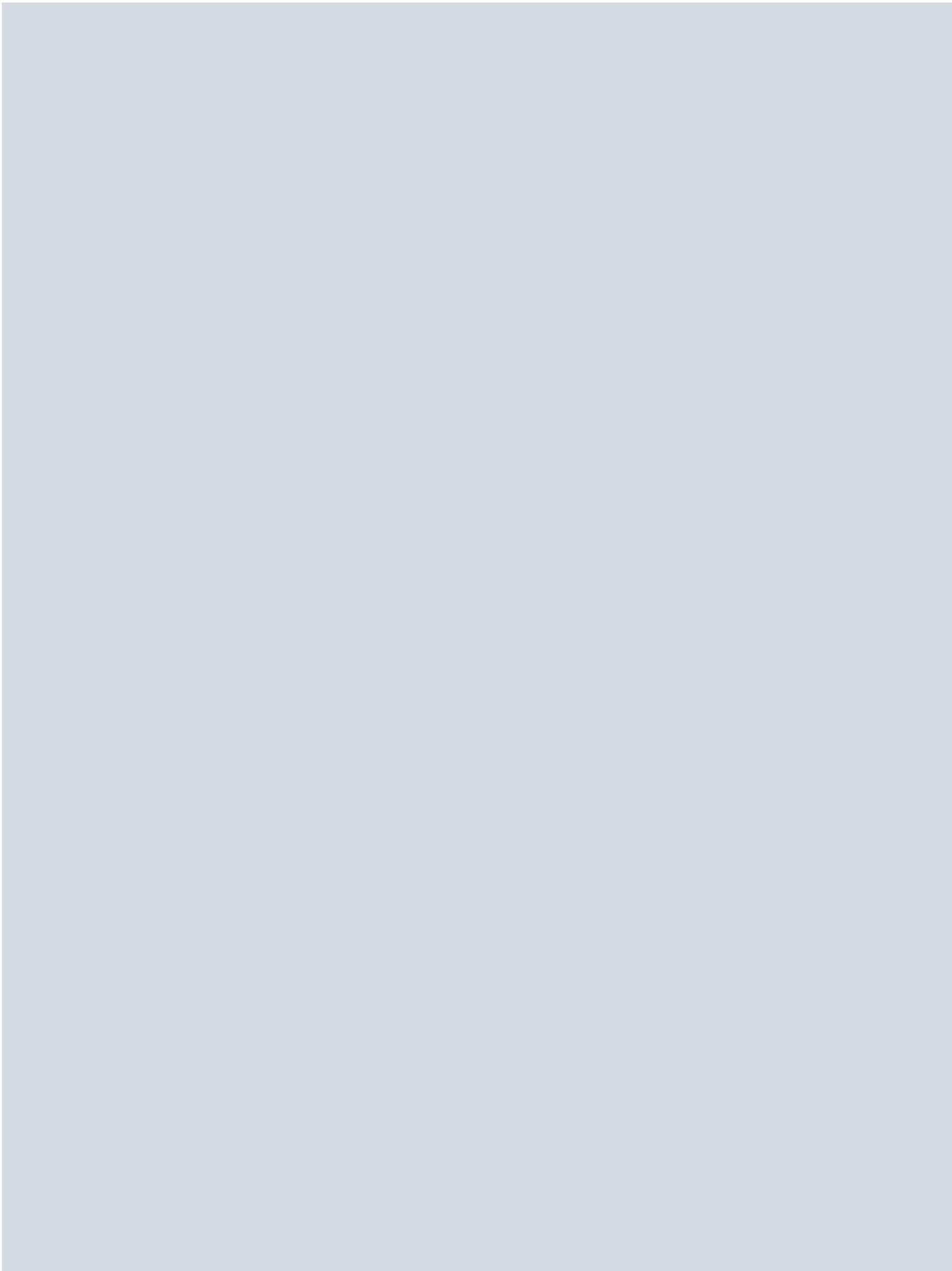
# IN A CHANGING WORLD, LET'S ACCELERATE THE ENERGY TRANSITION AND THE INCORPORATION OF CLIMATE RELATED ISSUES

**2021 TCFD REPORT**



**BNP PARIBAS**

The bank  
for a changing  
world



## GOVERNANCE

# 1

## STRATEGY

# 2

## RISK MANAGEMENT

# 3

## METRICS AND TARGETS

# 4

### P.4 GOVERNANCE OF CLIMATE-RELATED ISSUES



**P.6** The board of directors supervises the management of climate-related issues

**P.9** Management proposes and implements the group's climate strategy

### P.12 INTEGRATING CLIMATE-RELATED ISSUES IN THE GROUP'S STRATEGY AND ACTIVITIES



**P.14** The main climate-related risks and opportunities have been identified

**P.17** BNP Paribas places climate-related issues at the heart of its strategy and activities

**P.30** Resilience of the group strategy in various climate scenarios

### P.32 IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF CLIMATE-RELATED RISKS



**P.34** Process used to identify and analyse climate-related risks

**P.42** Climate-related risk management process and incorporation in overall risk management

**P.45** Exploratory work to better understand physical climate-related risks

### P.48 METRICS AND TARGETS USED TO ASSESS AND MANAGE CLIMATE-RELATED RISKS AND OPPORTUNITIES



**P.50** BNP Paribas has established metrics to assess, monitor and oversee climate-related issues

**P.56** BNP Paribas has set quantitative targets for the purpose of managing climate-related risks and opportunities

P.61 CONCLUSION  
P.62 GLOSSARY  
P.63 TABLE OF CONTENT  
P.63 PHOTOS  
P.63 CREDITS

# INTRODUCTION

In 2022, the Intergovernmental Panel on Climate Change (IPCC) updated its overview of the current state of knowledge on climate change, confirming and refining already known findings: climate change will affect all geographical areas and will have major consequences on ecosystems and societies in the coming decades and centuries; there is still a window of opportunity to take action - though small and in the process of closing - to avoid the worst consequences. For that to happen, carbon neutrality would need to be achieved on a global scale by around 2050.

**Committed to the fight against climate change since 2011, the BNP Paribas Group firmly believes in the importance of working together to achieve the goal of carbon neutrality, an essential prerequisite for stopping climate drift.** Working together effectively calls for greater transparency on the actions taken by the various economic players: **with that goal in mind, BNP Paribas has published an annual report on climate-related risks and opportunities since fiscal year 2019.**

The reporting framework chosen for this report is the framework defined by the Taskforce on Climate-related Financial Disclosures (TCFD), which was set up in 2015 by the G20 Financial Stability Board to improve climate-related financial information, and which now serves as a benchmark in this field. In accordance with the recommendations of the TCFD, this report is broken down into four pillars: Governance, Strategy, Risk Management, Metrics and Targets.

The report provides a summary of the measures implemented by the Group to identify, analyse and manage its climate-related risks and opportunities, and should be read in conjunction with other documents such as the Climate Analytics and Alignment Report<sup>1</sup>, the first BNP Paribas report on the Group's efforts to align its lending activity with the goal of net zero carbon emissions, as well as the climate reports of certain Group subsidiaries<sup>2</sup>.



<sup>1</sup> [https://group.bnpparibas/uploads/file/bnpp\\_climateanalytics\\_alignmentreport\\_final.pdf](https://group.bnpparibas/uploads/file/bnpp_climateanalytics_alignmentreport_final.pdf)

<sup>2</sup> i.e. the Sustainability Report of BNP Paribas Asset Management, and the Responsible Investment Strategy of BNP Paribas Cardif, in particular

# EXECUTIVE SUMMARY

BNP Paribas is keenly aware of the gravity of climate change in progress (as summarised in the IPCC reports in particular), the need to prepare accordingly and to act quickly and decisively in order to curb global warming to within the limits set by the Paris Agreement of 2015 and the Glasgow Climate Pact of 2021. BNP Paribas is also mindful of the role that the Group can play as the leading European bank.

**The Group has been committed to fighting climate change since 2011.** In 2018, it announced its ambition to align its activities with the objectives of the 2015 Paris Agreement: to limit the rise in the planet's average temperature to well below 2 °C, and to continue efforts to limit it to 1.5 °C compared to pre-industrial levels.

This ambition was mainly implemented through initiatives based on two levers: reducing the highest-emission activities and supporting the energy transition, both of which have generated significant results. These results are borne out by two key metrics: **between 2015 and 2021, BNP Paribas reduced the emissions intensity of its power generation financed portfolio by 47%, and increased its support for renewable energies from €7.2 billion to €18.6 billion.** The Group also significantly reduced its direct impact, with a carbon footprint of operations<sup>3</sup> dropping from 2.88 to 1.50 tonnes of CO<sub>2</sub>eq/FTE<sup>4</sup> over the same period.

**In 2021, BNP Paribas formalised and strengthened its ambition by joining GFANZ (Glasgow Financial Alliance for Net Zero) launched by the UN Environment Finance Initiative (UNEP-FI).** The Group became a member of the Net Zero Banking Alliance, BNP Paribas Cardif joined the Net Zero Asset Owner Alliance and BNP Paribas Asset Management joined the Net Zero Asset Managers Initiative. Joining these alliances is a means to steer financing and third-party asset management activities to align them with the trajectories required to finance a carbon neutral world by 2050.

Making these commitments sets a course for achieving a long-term ambition. For that to happen, they must now be accompanied by a profound Groupwide transformation, coupled with the determination of short/medium-term objectives and concrete actions. To meet its commitments and achieve its objectives, the Group is required to adapt its sales strategy, organisation and multiple

processes. These structural and complex changes complement the efforts undertaken for nearly a decade and are methodically addressed in all Group business lines.

In 2021, BNP Paribas strengthened the foundations for sustained long-term action. **The Group has thus made sustainable finance and especially the transition to a low-carbon economy the central focus of its 2022-2025 strategic plan (GTS2025, for Growth, Technology and Sustainability).** In the interest of implementing this Plan, BNP Paribas has combined these challenges with ambitious quantitative targets covering all of its activities. **The Group has set up a dedicated governance structure involving General Management on a Sustainable Finance Strategic Committee,** and has created and expanded teams dedicated to climate-related risks and opportunities in all its entities, commercial activities and support functions. **The Low Carbon Transition Group, a team of 250 professionals eventually, was created to assist the Group's customers with their own low-carbon transition.**

The acceleration of the climate strategy in 2021 is already paying off. **The Group just published its first Climate analytics and alignment report<sup>5</sup>,** in which it describes its strategy of aligning with a net-zero trajectory for three of the highest GHG emitting sectors that it finances: electricity generation, oil and gas, and automotive manufacturing. The Group has set ambitious 2025 targets for the loan books of these sectors, consistent with or exceeding the most ambitious scenarios defined by the International Energy Agency.

**It also significantly increased the inclusion of climate-related risks in its risk identification and management systems.** Accordingly, the description of climate-related risk drivers has been improved and a forward-looking risk assessment has refined diagnostics by business sector in order to better identify risks. **Climate scenarios have been included in the Group's ICAAP<sup>6</sup>,** which now better incorporates climate-induced risks for credit risk, operational risk, strategic risk and reputational risk. In addition, BNP Paribas participates in the climate stress tests organised by the supervisory and regulatory authorities. Finally, the risk management system was strengthened, notably by expanding the assessment of customer climate performance in the ESG Assessment.

Taken together, these advances allow BNP Paribas to better prevent the climate-related risks better seize the opportunities associated with the necessary economic transformation, and strengthen its resilience to the consequences of climate change. They also enable the Group to reduce its direct and indirect impact on the climate, thus meeting the second pillar of materiality as formalised by the European Commission ("double materiality").

Other elements will be added: the findings of the climate stress tests currently being conducted with the European Central Bank will be known in a few months' time, **the Group will publish the amount of its financed emissions (Scope 3) under the PCAF<sup>6</sup> methodology** at the end of 2022 and will set targets for aligning its emissions in seven business sectors by the end of 2024.

Achieving a goal of collective carbon neutrality by 2050 calls for extensive changes to be made in our societies and economies, and thus by the parties that finance them. BNP Paribas is taking its part in this transformation and taking resolute action in that direction. This third TCFD report addresses this, in addition to other past and future publications, which mark all key milestones in this long-term approach.

<sup>3</sup> | Energy consumption of buildings and business travel.  
<sup>4</sup> | number of employees, expressed in Full-Time Equivalent  
<sup>5</sup> | Internal Capital Adequacy Assessment Process  
<sup>6</sup> | Partnership for Carbon Accounting Financials

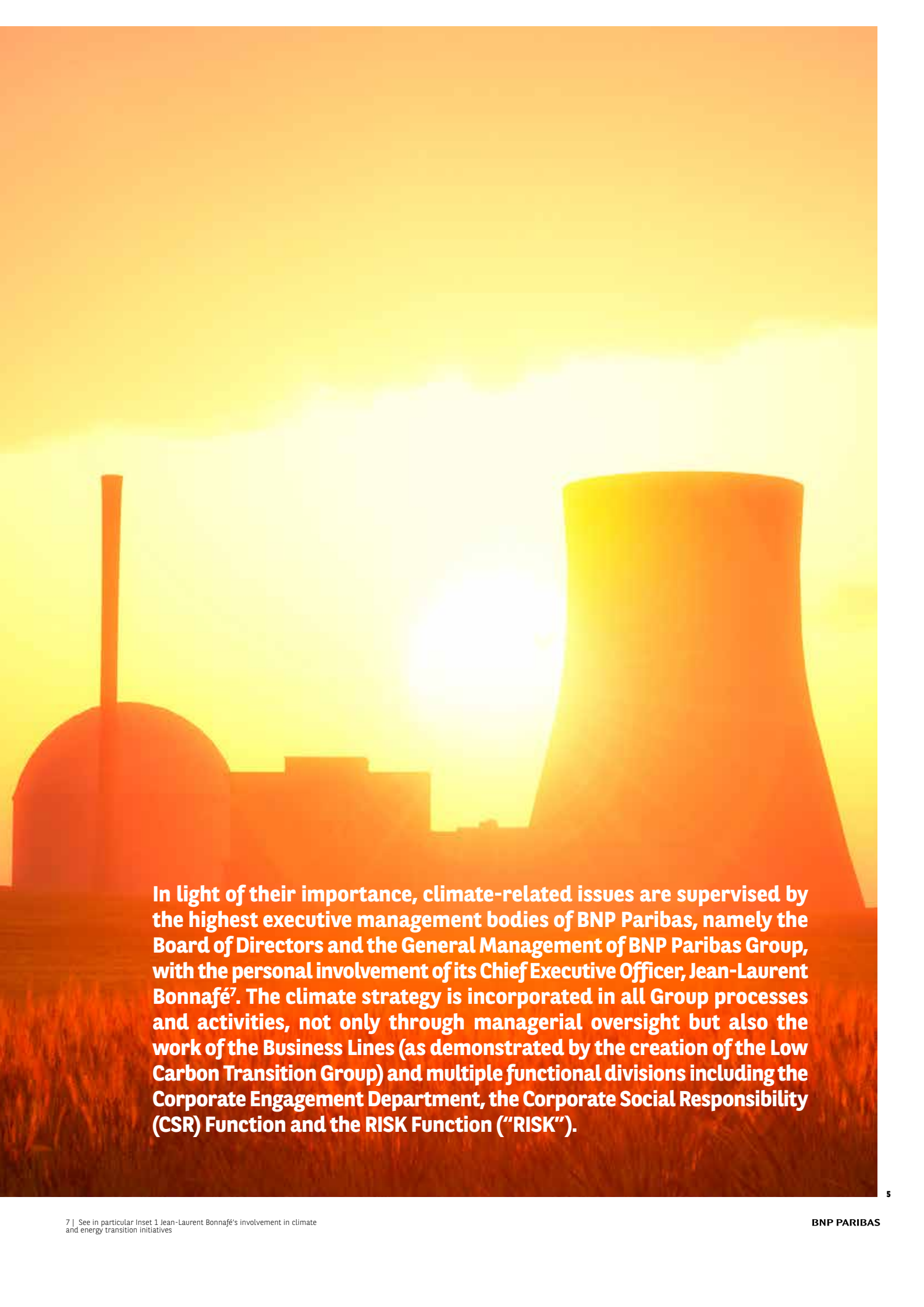


# 1

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## GOVERNANCE OF CLIMATE-RELATED ISSUES





**In light of their importance, climate-related issues are supervised by the highest executive management bodies of BNP Paribas, namely the Board of Directors and the General Management of BNP Paribas Group, with the personal involvement of its Chief Executive Officer, Jean-Laurent Bonnafé<sup>7</sup>. The climate strategy is incorporated in all Group processes and activities, not only through managerial oversight but also the work of the Business Lines (as demonstrated by the creation of the Low Carbon Transition Group) and multiple functional divisions including the Corporate Engagement Department, the Corporate Social Responsibility (CSR) Function and the RISK Function (“RISK”).**

7 | See in particular Inset 1 Jean-Laurent Bonnafé's involvement in climate and energy transition initiatives

# 1.1

## THE BOARD OF DIRECTORS SUPERVISES THE MANAGEMENT OF CLIMATE-RELATED ISSUES

*The approach taken by the BNP Paribas Board of Directors to addressing climate-related issues in 2021 was in keeping with previous years. However, issues related to Corporate Social Responsibility (CSR) and more specifically to the climate have taken on more importance: the climate has been placed more frequently on the agenda of the Board and its specialised committees, in connection with the initiatives of the European Central Bank and General Management, particularly with regard to membership in the Net Zero Banking Alliance; the Board strengthened its CSR expertise, now with seven members specialising in the field; finally, the percentage of CEO remuneration linked to the Group's CSR performance has been increased from 10% to 15%.*

The Board of Directors of BNP Paribas is involved in climate and energy-related issues in multiple ways:

- The Board of Directors validates the Group's strategy on energy and climate-related matters, with the support of two specialised committees;
- Seven members of the Board of Directors have expertise in CSR, two of them specifically on climate-related issues;
- The Board of Directors validates the variable compensation granted to corporate officers, based in part on the Group's CSR performance (including climate);
- The Board of Directors validates the climate-related metrics, policies and undertakings presented in the Universal Registration Document.

### THE BOARD OF DIRECTORS VALIDATES THE GROUP'S STRATEGY ON ENERGY AND CLIMATE-RELATED MATTERS, WITH THE SUPPORT OF TWO SPECIALISED COMMITTEES

In accordance with its Internal Rules, the Board of Directors determines the objectives of BNP Paribas' business and oversees their implementation by the General Management, taking into consideration the social and environmental stakes and challenges of BNP Paribas' operations<sup>8</sup>. To that end, it validates the Bank's CSR policy, aligned with the 17 Sustainable Development Goals (SDGs) set out by the United Nations, including the 13th dedicated to the action to combat climate change.

It regularly examines, in line with the strategy defined by the Board itself, opportunities and risks such as financial, legal, operational, social and environmental risks as well as the measures taken as a result.

Of the four specialised committees responsible for assisting the Board of Directors, two are more specifically focused on supervising the risks and opportunities associated with CSR and climate:

The Corporate Governance, Ethics, Nominations and CSR Committee ("CGEN") is responsible for overseeing issues relating to social and environmental responsibility. To that end, it ensures that the Group contributes to sustainable and responsible economic development, mainly through ethical financing of the economy, promotion of employee development and engagement, protection of the environment and prevention of climate change<sup>9</sup>.

The CGEN also sets targets to achieve in terms of diversity of professional qualifications and experience for the members of the Management body, with the aim of ensuring that they hold the necessary expertise at all times to understand the risks and challenges, including social and environmental challenges, and potential developments of the Company<sup>10</sup>.

The Internal Control, Risk Management and Compliance Committee ("CCIRC") advises the Board of Directors on the suitability of BNP Paribas' overall strategy and tolerance for risks, including climate-related risks, both current and future. It assists the Board when it verifies the implementation of this strategy by the executive officers and by the Head of the Risk Function. In that role, it examines the primary objectives of the Group's risk policy, including those of a social and environmental nature, relying on the transaction risk and profitability measurements reported to the Committee in accordance with regulatory requirements, and any specific matters associated with these topics and methods<sup>11</sup>.

The CCIRC reviews the Risk Appetite Statement (RAS), which contains metrics measuring the Group's risk profile for its various types of risk exposures. Thresholds are assigned to each metric, reflecting the various levels of risk. Once these thresholds are reached, a pre-established process is triggered in which General Management and the Board of Directors are notified and action plans implemented, where applicable. These metrics are tracked in the risk dashboard presented to the CCIRC; one metric is directly associated with climate-related risks: the primary and secondary energy mix financed by BNP Paribas.

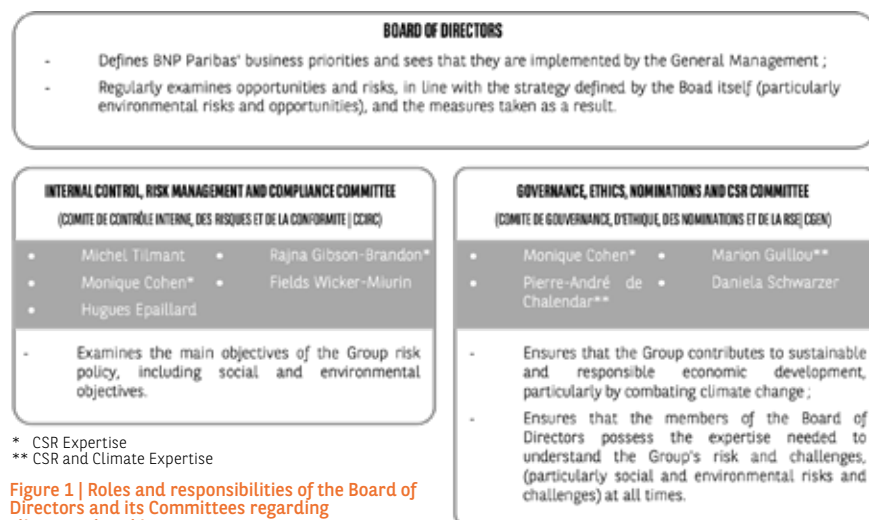


Figure 1 | Roles and responsibilities of the Board of Directors and its Committees regarding climate-related issues

The distribution of roles and responsibilities on the Board of Directors and its Committees with respect to supervision of climate-related issues is illustrated in the diagram in Figure 1.



Climate-related issues were specifically addressed thirteen times at Board and Board Committee meetings in 2021:

- At one of the five CGEN meetings, during the presentation of the 2020 highlights and the 2021 outlook;
- At four of the nine CCIRC meetings, during the presentation of the Group's action plan in response to the European Central Bank's Guide on climate-related and environmental risks and the renewal of the Aviation, Oil and Gas and Mining and Metals sectorial budgets;
- At a joint CCIRC-CGEN meeting, during the follow-up of the ESG action plan;
- At seven of the thirteen meetings of the Board of Directors, during the presentation of the report on the work of the CGEN and CCIRC, discussions with the European Central Bank (Joint Supervisory Team - JST) on climate risk, and membership in the Net Zero Banking Alliance (NZBA).



#### SEVEN MEMBERS OF THE BOARD OF DIRECTORS HAVE EXPERTISE IN CSR, TWO OF THEM SPECIFICALLY ON CLIMATE-RELATED ISSUES

Persons with the potential to become directors are identified, selected and recommended in accordance with a strict procedure designed to ensure the continued diversity and collective expertise of the Board of Directors as the Bank's strategy evolves. Subsequent to this procedure, Corporate Social Responsibility is one of the three key areas of expertise for 7 of the Bank's 15 directors<sup>12</sup>. Of these seven, two hold a recognized climate-related expertise:

- **Marion Guillou**, Director of BNP Paribas since May 2013, is one of the 13 experts of the **Haut Conseil pour le Climat (High Council on Climate, HCC)** established in November 2018 by the President of the French Republic. The HCC, made up of specialists in the fields of climate science, economics, agronomics and the energy transition, is tasked with providing independent expertise on the Government's climate policy. Marion Guillou, a former researcher, was Chair and Managing Director of INRA (French Institute for Agronomic Research) (2004-2012), Chair of the Board of Directors of École Polytechnique (2008-2013), Managing Director of INRA (2000-2004). She created the Joint Programming Initiative on Agriculture, Food Security and Climate Change (FACCE-JPI).
- **Pierre-André de Chalendar**, Director since May 2012, has worked for many years encouraging companies to mobilise their efforts on climate-related issues. Chairman and CEO of Saint-Gobain since 2010, a key player in the energy renovation, he headed the think tank *Entreprises pour l'Environnement* (EpE) from 2012 to 2015 and, in that capacity, led the way in mobilising French corporations at the first Business Climate Summit held in Paris in 2015 ahead of COP 21. In 2016, he published a book entitled "*Notre combat pour le climat. Un monde décarboné et en croissance, c'est possible*", describing the central role that companies need to play in combating climate change.

Furthermore, **Jean-Laurent Bonnafé**, Chief Executive Officer of BNP Paribas, is personally involved on the climate and energy transition front, as evidenced by the multiple public positions and commitments he has taken (see **Inset 1**).

#### Inset 1 | Jean-Laurent Bonnafé's involvement in climate and energy transition initiatives

Jean-Laurent Bonnafé, CEO of BNP Paribas, has fully engaged the Group he runs in the funding of the energy transition and the fight against climate deregulation. He has publicly expressed his deep conviction in the importance of climate-related issues and is personally involved in supporting collective action.

When BNP Paribas was named *Best Bank in the World for Sustainable Finance* by Euromoney, for example, he reiterated that **"the climate is vital for the future of humanity, the future of BNP Paribas and the future of our customers."** "Successfully responding to these changes and meeting the expectations of civil society and the customers who trust us to help them accelerate their transition is an ambitious yet exciting prospect that lies at the heart of the strategic plan."

He has also served as Chairman of the think tank *Entreprises pour l'environnement* (EpE) since 2019, working to incorporate environmental concerns in the strategies of the 50 or so corporations in its ranks.

12 | [https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks-58213f6564\\_fr.pdf](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm.202011finalguideonclimate-relatedandenvironmentalrisks-58213f6564_fr.pdf)

13 | Jean-Laurent Bonnafé, Jacques Aschenbroich, Pierre-André de Chalendar, Monique Cohen, Rajna Gibson-Brandon, Marion Guillou, Daniela Schwarzer (2021 URD, pg. 56)

### THE BOARD OF DIRECTORS VALIDATES THE VARIABLE COMPENSATION GRANTED TO CORPORATE OFFICERS, BASED IN PART ON THE GROUP'S CSR PERFORMANCE (INCLUDING CLIMATE)

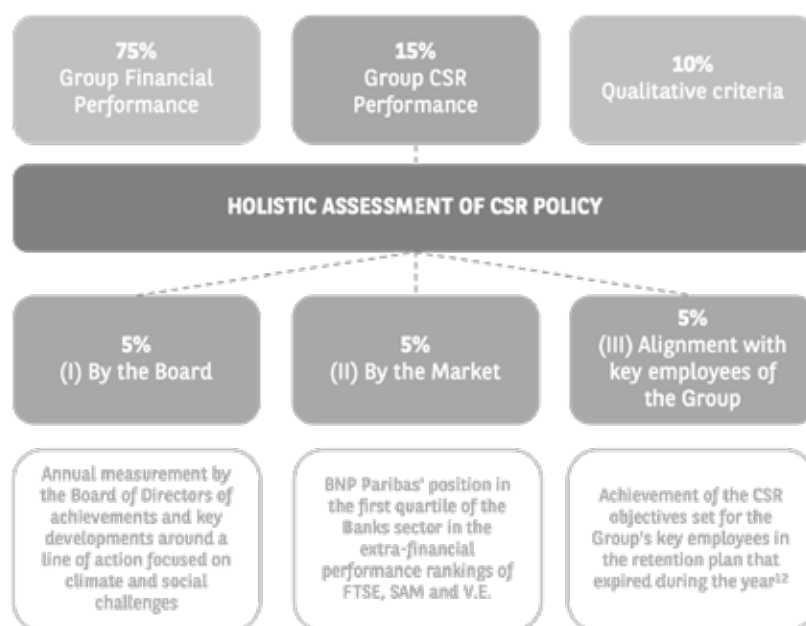
The compensation paid to corporate officers includes an annual variable component associated with criteria that are representative of the Group's earnings, CSR criteria and a qualitative assessment performed by the Board of Directors. The portion of variable compensation linked to the Group's CSR performance was increased from 10% to 15% in 2021.

The attribution of the portion of annual variable pay tied to the Group's CSR performance is based on a multi-criteria measurement, founded on a holistic approach to the environmental, civic and social initiatives undertaken by the Group. As illustrated in Figure 2, this remuneration structure incorporates three criteria, each weighted 5%:

- The Board of director's assessment of the year's highlights, primarily with regard to climatic and social challenges (see Inset 2);
- Publications of extra-financial rating agencies measuring the quality of the BNP Paribas' CSR positioning relative to its peers;
- An alignment with the CSR objectives included in the compensation linked to retention plans granted to the Group's key employees<sup>14</sup>.



Figure 2 | Share of variable pay granted to corporate officers associated with CSR performance



These CSR performance targets were considered as fully achieved for financial year 2021.

#### Inset 2 | Assessment by the Board of Directors of CSR achievements and highlights for FY 2021.

In performing the assessment, the Board of Directors found that this criterion was met based on the key social and climate-related events of 2021. The Board noted in particular the following achievements in the ecological and energy transition category:

- Creation of the Low-Carbon Transition Group, comprising 250 professionals dedicated to financing the energy transition of the Bank's customers;
- The Group's position as No. 2 in the world in terms of green bonds and No. 1 for the issuance of sustainability-linked bonds in euros according to Dealogic;
- Launch of a €150 million fund by BNP Paribas and Solar Impulse to support innovative and high-potential start-ups in the ecological transition.

### THE BOARD OF DIRECTORS VALIDATES THE CLIMATE-RELATED METRICS, POLICIES AND UNDERTAKINGS PRESENTED IN THE UNIVERSAL REGISTRATION DOCUMENT

The key components applied to the management of climate-related issues by BNP Paribas are presented in the Universal Registration Document (URD), validated by the Board of Directors and filed with the AMF (French Securities Regulator). They are mainly detailed in Chapter 7.2 on "Our economic responsibility: financing the economy in an ethical manner" and 7.5 on "Our environmental responsibility: accelerating the energy and ecological transition", and are reviewed by one of the Statutory Auditors, designated as an independent third party, for the purposes of their report on the verification of the consolidated extra-financial performance statement.

# 1.2

## MANAGEMENT PROPOSES AND IMPLEMENTS THE GROUP'S CLIMATE STRATEGY

*The growing importance of sustainable finance and climate-related risks and opportunities have led BNP Paribas to significantly strengthen its governance system in these areas. In the second half of 2021, and for the purpose of preparing its 2022-2025 strategic plan, BNP Paribas established a Sustainable Finance Strategic Committee chaired by its Chief Executive Officer, structured its network of 400 internal experts by creating a Network of Expertise in Sustainability Transitions, and created a team that will include 250 professionals by 2025, the Low Carbon Transition Group, dedicated to helping Group customers complete their own energy transition.*

The strategic climate objectives, set by the Board of Directors, are prepared and operationally implemented across the Group by the entire Management structure:

- The General Management determines the Group's climate policy and oversees its performance;
- The Corporate Engagement Department and the CSR Department propose the climate strategy and support its operational implementation;
- A team of 250 professionals by 2025, the Low Carbon Transition Group, rounds out the support system for customers in their low-carbon transition;
- The operational entities and the RISK Function (RISK) are responsible for managing risks, including climate-related risks;
- The compensation granted to key employees of BNP Paribas is indexed in part to the Group's CSR performance data, related to energy and climate-related issues.

### THE GENERAL MANAGEMENT DETERMINES THE GROUP'S CLIMATE POLICY AND OVERSEES ITS PERFORMANCE

For climate-related risks and opportunities in all fields, the Chief Executive Officer and the Chief Operating Officers submit a strategy proposal to the Board of Directors, then subsequently oversee the management of the company and its performance. **Jean-Laurent Bonnafé, Chief Executive Officer, is responsible for the climate strategy**, managed by the Head of Company Engagement (a member of the Group Executive Committee) in his role as CSR supervisor. The Company Engagement Department, CSR Department and operational entities are responsible for the operational implementation of the Group's climate strategy. The Risk and Finance functions are also highly involved, through their risk management and financial reporting and Level 2 control roles.

Over the course of 2021, the Group's climate strategy, implementation of the policy calling for the alignment of the loan book with the Paris Agreement, and the main associated metrics were discussed at regular meetings chaired by Jean-Laurent Bonnafé.

The Group's ESG governance system was strengthened and restructured in the second half of 2021 in order to better incorporate environmental and climate-related issues in the definition of the strategy, its oversight and management of the associated risks. This new governance is led by a **"Sustainable Finance Strategic Committee", chaired by the Chief Executive Officer.**

This bi-monthly committee, comprised of the members of General Management and the heads of the business lines and functions involved, **validates the overall sustainable finance strategy, decides on the overall commitments made by the Group and the main objectives of commercial policies in Sustainable Finance, and monitors their operational implementation.**

This committee is supported by several newly created committees, including:

- a Sustainable Finance Infrastructure Committee, to industrialise ESG processes, data and reporting in order to meet the growing needs of customers, regulators and investors;
- an ESG Regulatory Committee, at the General Management level, to assess the operational consequences of the main new regulations.

### THE CORPORATE ENGAGEMENT DEPARTMENT AND THE CSR DEPARTMENT PROPOSE THE CLIMATE STRATEGY AND SUPPORT ITS OPERATIONAL IMPLEMENTATION

Represented on the Group Executive Committee, the Company Engagement Department is in charge of:

- Strengthening CSR and diversity practices, thus converging all corporate drivers to address major social and environmental issues. It coordinates the transformation of culture, skills, and business processes to enable a shift to sustainable finance;
- Identifying and implementing commitments in the fields of economic development, environment and energy transition, social inclusion and regional development, diversity and promotion of human rights.



Made up of around thirty people, the CSR Department reports to the Corporate Engagement Department and is structured as follows (Figure 3):

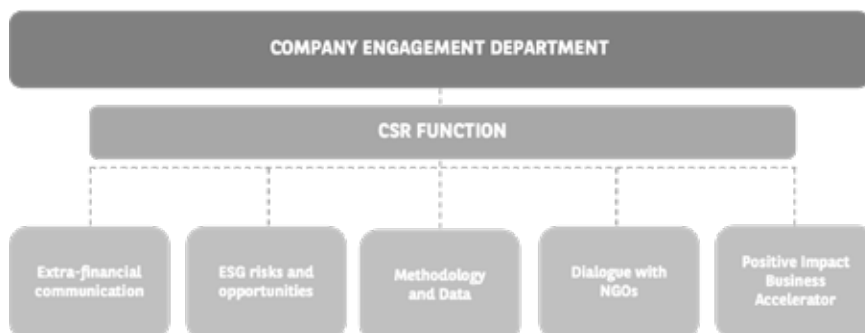
Within the CSR Department, the “ESG risks and opportunities” team has the following roles:

- **Identifying environmental risks, including climate-related risks** liable to have an impact on the Group's commercial relations and defining financing and investment criteria<sup>15</sup> in order to limit the Environmental, Social and Governance (ESG) risks incurred by BNP Paribas;
- **Helping all business lines seize the business opportunities associated with the climate and the energy transition.** It works continuously with the Functions and the business lines throughout the Group to develop such opportunities.

The CSR Department relies on a network created as from 2012, working within the divisions, business lines, networks, functions and subsidiaries to pave the way for the deployment of the CSR policy across the Group. A total of more than 220 employees spend the majority or all of their time on CSR issues, including climate-related issues, at BNP Paribas. In order to ensure that these issues are incorporated in the strategy, each entity's CSR manager reports to a member of the Executive Committee in charge of this matter.



Figure 3 | CSR Department organisation chart



In 2021, efforts were made to identify internal expertise in the transition to a sustainable economy, **resulting in the creation of a network of nearly 400 internal experts, including more than 100 energy transition specialists.** Called the **Network of Experts in Sustainability Transitions (NEST)**, its purpose is to deploy, amplify and share expertise within the Group.

**A TEAM OF 250 PROFESSIONALS BY 2025, THE LOW CARBON TRANSITION GROUP, ROUNDS OUT THE SYSTEM FOR HELPING CUSTOMERS COMPLETE THEIR OWN LOW CARBON TRANSITION**

Supporting customers in their transition, which lies at the heart of the Group's new strategic plan, requires specialised teams. To that end, the system in place was strengthened in 2021 by **creating a structure dedicated to helping international corporate and institutional customers accelerate their transition to a sustainable and low-carbon economy: the Low-Carbon Transition Group.** Building on BNP Paribas' leadership in capital markets and sustainable finance, 100 new hires are gradually being added to this team, which will eventually count 250 professionals.

In addition to a wide range of corporate and investment banking solutions, the team will leverage the mobility skills of Arval, Leasing Solutions and Personal Finance, BNP Paribas Real Estate's high environmental performance real estate expertise, BNP Paribas Asset Management's sustainable and thematic investment solutions, the investment expertise of BNP Paribas Cardif

and BNP Paribas Principal Investments, BNP Paribas Wealth Management's retail advisory capabilities and the climate and biodiversity expertise of BNP Paribas' Corporate Engagement and CSR departments.

This new structure complements a customer support system that has been in place for many years. For example:

- As of 2009, in Belgium, the **BNP Paribas Fortis Sustainable Business Competence Center (SBCC)** offers expertise and support to help businesses design and fund renewable energy production infrastructures or improve the energy efficiency of their facilities;
- In 2017, **BNP Paribas Asset Management created an ESG centre of expertise** comprising all of its ESG engagement, integration and research activities;
- In 2019, **Commercial & Personal Banking in France (CPBF) has established a Green Desk**, a centre of expertise focused on energy efficiency, renewable energies and their value chain.





### THE OPERATIONAL ENTITIES AND THE RISK FUNCTION (RISK) ARE RESPONSIBLE FOR MANAGING RISKS, INCLUDING CLIMATE-RELATED RISKS

In accordance with the internal organisation of the permanent control system, the operational entities form the first line of defence. They comprise the primary contributors to the permanent control system, responsible for managing their risks, including those related to environmental factors.

**RISK, an independent control function, is in charge of organising and supervising the risk management system covering the Group's risk exposures within its remit, including environmental and social risks.** To that end, RISK is tasked with defining, developing, implementing and maintaining, in close collaboration with the Group CSR Department, the framework governing ESG risk management.

A dedicated team, RISK ESG, made up of a dozen people, supports and manages the integration of ESG risk drivers in the Group's risk management system and the activities exercised by the RISK teams. In conjunction with the Group's various stakeholders, this team:

- Coordinates and supports the RISK teams in the integration of ESG risk drivers across their entire scope of responsibility;
- Ensures the overall consistency of the integration of ESG risk drivers in the Group's risk management system and defines the Group's overall policies and approaches;
- Provides training in ESG risk drivers, in coordination with the Group's stakeholders in charge of sustainable finance training;
- Monitors changes in banking regulations and supervision related to ESG risk drivers.

This team actively contributes to the Sustainable Finance Infrastructure Committee's "ESG Methodologies, Analysis and Risks Management" programme described above, a programme dedicated to strengthening the integration of ESG drivers in the risk management framework.

### THE COMPENSATION GRANTED TO KEY EMPLOYEES OF BNP PARIBAS IS INDEXED IN PART TO THE GROUP'S CSR PERFORMANCE, RELATED TO ENERGY AND CLIMATE ISSUES

The importance of CSR and climate issues in BNP Paribas' governance is also reflected in the inclusion of CSR criteria in the remuneration of its employees. **Nine of the Group's CSR dashboard metrics are included in the calculation of the three-year loyalty plan for more than 7,000 key employees<sup>16</sup> of the Group,** making up 20% of the payment conditions. Two of the criteria are directly related to energy/climate:

- **Amount of renewable energy financing;**
- **Assessment of greenhouse gas emissions** related to the energy consumption of buildings and business travel, in tonnes of CO<sub>2</sub>eq/FTE.

In 2021, the CSR dashboard was updated for the 2022-2025 Strategic Plan. **Five out of ten metrics now include climate-related issues,** three of which fall within a broad sustainability framework and two are specifically climate-related

- Amount of sustainable loans<sup>17</sup>;
- Amount of sustainable bonds;
- Amount of sustainable investments<sup>18</sup>;
- **Amount of support enabling our clients to transition to a low-carbon economy;**
- **Greenhouse gas emissions** related to the energy consumption of buildings and business travel, in tonnes of CO<sub>2</sub>eq/FTE.



<sup>16</sup> | Key employees: senior managers, high-potential employees and local key resources

<sup>17</sup> | Sustainability-linked loans related to environmental and social issues, originated by BNP Paribas and granted to its customers.

<sup>18</sup> | Assets under management of Article 8 & 9 funds according to the Sustainable Finance Disclosure Regulation.



# 2

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## STRATEGY

### INTEGRATING CLIMATE-RELATED ISSUES IN THE GROUP'S STRATEGY AND ACTIVITIES



**The direct and indirect consequences of climate change represent significant challenges for BNP Paribas. The associated risks and opportunities, subject to constant analysis, are incorporated in the Group's strategy, in its operations and in each of its business lines: corporate and investment banking (CIB division), retail banking and specialised businesses (CPBS division), asset management and insurance (IPS division). This continuous improvement approach, the Group's integrated and diversified model and its commitments to financing a carbon neutral economy are the keys to BNP Paribas' resilience to the varying range of climate scenarios.**

# 2.1

## THE MAIN CLIMATE-RELATED RISKS AND OPPORTUNITIES HAVE BEEN IDENTIFIED

*In line with 2020, the description of climate-related risks and opportunities by BNP Paribas mobilised the expertise of multiple teams. Risks associated with climate factors were described by the Group's general risk identification process, Risk-ID, and then supplemented by CSR experts. This process was improved in 2021, offering a more detailed classification of physical and transition risks liable to affect the Group.*

Climate change and its direct and indirect consequences present risks and opportunities for BNP Paribas:

- BNP Paribas is exposed to climate change risk;
  - Climate change and its consequences are identified as risk drivers for BNP Paribas;
  - Different risk drivers stem from the necessary energy and ecological transition;
  - Climate-related physical risks also affect Group activities.
- The energy transition also presents opportunities for BNP Paribas.

### 2.1.1. BNP PARIBAS IS EXPOSED TO CLIMATE CHANGE RISKS

#### CLIMATE CHANGE AND ITS CONSEQUENCES ARE IDENTIFIED AS RISK DRIVERS FOR BNP PARIBAS

Climate change and its consequences are identified as risk drivers for BNP Paribas, and recognised as such in its Universal Registration Document (URD), specifically in the chapter meeting legal and regulatory requirements relating to risks of the BNP Paribas Group (Chapter 5 - Pillar 3)<sup>19</sup>: **"The BNP Paribas Group could experience business disruption and losses due to climate change risks such as transition risks, physical risks or liability risks."**

BNP Paribas Group is exposed to climate change risks both directly, through its own operations and assets, and indirectly, through its financing and investment activities. There are two main categories of climate-related risks:



#### PHYSICAL RISKS

stemming from the direct impact of climate change on people and property due to extreme weather events or long-term phenomena such as rising water levels or increasing temperatures.



#### TRANSITION RISKS

arising from a change in the behaviour of economic and financial agents in response to the implementation of energy or technological development policies.

Furthermore, liability risks can also arise from both of these risk categories. They correspond to the damages and interests that a legal entity would have to pay if it were found to be responsible for global warming. BNP Paribas is integrating the assessment of these risks in its risk management system.



More specifically, **the consequences of climate change on the bank's activity are considered in the risk identification framework as risk drivers**, liable to trigger, favour or aggravate a wide variety of risk types, whether financial (commercial risks, credit risks, etc.) or non-financial risks (operational risks) and affect the Group, either directly in its own operations and assets or indirectly through its financing and investment activities (**section 3.1.1, pg. 34**).

BNP Paribas monitors the potential impact of these risk drivers in the conduct of its own business and that of its counterparties, and in its proprietary and third-party investments. The Group integrates these risk drivers in its risk management framework. It gradually enhances their assessment to keep pace with advances in methods employed to measure and analyse their impact on traditional risks, and particularly those relating to creditworthiness. The quantitative assessment of the materiality and relative importance of these drivers will improve as methods evolve and metrics and indicators are developed.

The risk management processes are detailed in **Chapter 3** of this report.

# DIFFERENT RISK FACTORS STEM FROM THE NECESSARY ENERGY AND ECOLOGICAL TRANSITION

The work done over the course of the risk identification process resulted in the description of the possible effects of risk drivers related to climate change in **Tables 1 and 2**. Two qualitative indications were added on the basis of expert views:

- An estimation of the time horizon at which each risk is liable to materialise: short term


(ST), i.e. within two years; medium term (MT), i.e. between three and ten years; or long term (LT), i.e. after ten years;

- An estimation of the potential significance of each risk: between “+” (moderate) and “+++” (significant).

Changes brought about by the transition of the economies and markets in which the Group operates

may create risks for BNP Paribas. **Table 1** presents some of these risks.

**Table 1 | Some examples of possible impacts of transition risks**


RISQUE	TYPE OF RISK	DESCRIPTION	BUSINESS AFFECTED	TIME FRAME*	POTENTIAL SIZE OF IMPACT*
<b>TRANSITION RISK</b>  	<b>STRATEGIC AND COMMERCIAL RISK</b>	Strategic decisions related to CSR considerations that BNP Paribas may take, such as the total or partial withdrawal of financing for certain specific sectors, activities or counterparties, would be liable to result in decreased revenues.	Financing activities	ST/MT	++/+++
		Risk related to the development or non-development of new products aimed at reducing the carbon footprint of the industries in which banks still operate. For example: risk of losing market share for the Group, and particularly its subsidiaries Arval and Leasing Solutions, if they fail to sufficiently adapt to customer demand for more environmentally-friendly products and services (electric cars, leasing of low-carbon equipment, etc.).	All activities	MT	++
	<b>CREDIT, COUNTER-PARTY AND SETTLEMENT RISK</b>	Credit risk associated with the reduction in the solvency of customers generating high GHG emissions, and therefore liable to be heavily affected by measures such as a carbon tax.	Financing activities	MT	+++
		Lack of strategic forecasting and transformation related to climate change by customers that may struggle to find financial partners and eventually encounter profitability and solvency problems.	Financing activities	MT	++/+++
		Problems in dealing with the transition to a low carbon economy experienced by certain sectors (such as transport, oil, gas, automotive, aviation or agriculture).	Financing activities	ST/MT	+ / ++
		Inability to rent certain properties due to poor energy performance, which could lead to higher cost of risk in portfolios.	Financing activities	ST/MT	++/+++
	<b>REPUTATIONAL RISK</b>	Reputational issues are increasingly liable to arise from climate change issues and from the fact that the bank can be perceived as liable, causing significant damage (loss of customers, difficulty in promoting commercial development).	Group	ST/MT	++/+++
		In asset management activities, external accusations (customers, markets, institutions, etc.) of suspected greenwashing in “ESG” funds marketed by the Group could damage the reputation and ultimately have impacts on these activities and the associated revenues.	Asset Management	ST/MT	+ / ++
	<b>LIQUIDITY RISK</b>	Behavioural changes could lead to unexpected outflows.	Group	ST/MT	+
		The eligibility criteria used to qualify assets eligible for ECB refinancing operations may change, generating new constraints that could hinder the Group's current refinancing strategy.	Group	ST/MT	+ / ++
	<b>MARKET RISK</b>	Risk related to the potential impact of carbon prices and/or a carbon tax on commodity prices.	Market activities	ST/MT	+
		Decrease in the value of funds overexposed to business sectors or companies significantly affected by the transition to a low-carbon economy.	Asset Management	MT	++
	<b>OPERATIONAL RISK</b>	Rise in carbon prices (tax or quotas) applied to BNP Paribas emissions in its operational scope *	Internal	MT	+
		Tougher regulations on climate reporting, made difficult due to lack of robust and consistent data from corporate customers. *	Internal	ST	+
		Tougher environmental standards (on the energy efficiency of Group buildings, on its company car fleet, etc.) liable to call for additional investments *	Internal	MT	+

\* indicative qualitative information, estimated on the basis of expert appraisals

### CLIMATE-RELATED PHYSICAL RISKS ALSO AFFECT GROUP ACTIVITIES

The way the physical impacts of climate change are liable to affect the Group's business is illustrated in Table 2.

Table 2 | Some examples of potential impacts of physical risks

RISK	TYPE OF RISK	DESCRIPTION	BUSINESS AFFECTED	TIME FRAME*	POTENTIAL SIZE OF IMPACT*
<b>PHYSICAL RISK</b> 	<b>STRATEGIC AND COMMERCIAL RISK</b>	Risk of under-performance by funds overexposed to economic players particularly affected by the direct impacts of climate change, or by the drop in revenues generated by customers in sectors seriously affected by the physical impacts of climate change (e.g. agricultural sector hit by droughts and reduced access to fresh water).	Asset Management	MT/LT	++
	<b>CREDIT, COUNTER-PARTY AND SETTLEMENT RISK</b>	Credit risk due to the decreased solvency of customers whose operations and processes are disrupted by climate change.	Financing activities	MT	+ / ++
		Credit risk related to the situation of real estate assets. For example, disruptions in the water cycle and the increased frequency of storms can destabilise the real estate market, influence the value of assets and compromise the ability of individual borrowers to repay their debts.	Financing activities	MT/LT	+ / ++
	<b>RISQUE DE MARCHÉ</b>	Physical risk drivers of extreme severity and intensity could have an impact on market risks in the event of a sharp fall in prices or the revaluation of financial assets and commodities due to large-scale damage, reduced production capacity or demand.	Market activities	MT/LT	++
	<b>RISQUE OPERATIONNEL</b>	Chronic and acute physical risk drivers (particularly river and coastal flooding, droughts, heat waves, forest fires, storms and heavy precipitation) can have various adverse consequences for the Bank, including direct consequences on its physical and tangible assets (destruction of assets, unavailability, etc.).	Operations	MT/LT	+

\* indicative qualitative information, estimated on the basis of expert appraisals

## 2.1.2. THE ENERGY TRANSITION ALSO PRESENTS OPPORTUNITIES FOR BNP PARIBAS

The fight against climate change requires massive investment by companies, institutions and the public sector in the field of technology, infrastructure and organisational transformation. These new needs may represent opportunities for BNP Paribas. The main such opportunities are identified in Table 3. As is true for the risks presented above, two qualitative indications were added on the basis of expert views:

- An estimation of the time frame in which each risk or opportunity is liable to materialise: short term (ST), i.e. within two years; medium term (MT), i.e. between three and ten years; or long term (LT), i.e. after ten years.
- An estimation of the potential significance of each risk: between "+" (moderate) and "+++" (significant).

Table 3 | Some of the main climate-related opportunities for BNP Paribas.

MAIN BUSINESS AFFECTED	DESCRIPTION	TIME FRAME	BUSINESSES AFFECTED	POTENTIAL SIZE OF IMPACT
<b>CORPORATE AND INSTITUTIONAL BANKING (CIB)</b>	Robust growth in Green Bonds, Green Loans and Sustainability-Linked Loans correlated with climate-related criteria	ST	Financing activities	+++
	Revenues generated by renewable energy financing, decarbonisation of activities and investments in low-carbon projects	ST	Financing activities	+++
	Financing and investments in start-ups specialising in the energy transition	ST	Financing activities	+
<b>RETAIL BANKING AND SPECIALISED BUSINESSES (CPBS)</b>	Loan offers (home loans and consumer loans) dedicated to the energy renovation of individual households (green mortgage loans, special consumer loans in particular)	ST	Retail Banking, BNP Paribas Personal Finance	++
	Development of the BNP Paribas Leasing Solutions range of more energy efficient and/or less GHG-emitting leasing products	ST/MT	BNP Paribas Leasing Solutions	++
	Arval's expanded range of electric cars to meet growing demand	ST/MT	Arval	+
<b>INVESTMENT AND PROTECTION SERVICES (IPS)</b>	Development of sustainable investment solutions supporting the energy transition	ST/MT	Asset Management	++
	Development of low-carbon products: low-carbon real estate development with BNP Paribas Real Estate, Climate indices and green funds with BNP Paribas Asset Management, green investments via retail funds managed by BNP Paribas Cardif, etc.	ST	Group	+ / ++
<b>OPERATIONAL SCOPE</b>	Energy renovation of buildings (offices, branches, etc.) and IT optimization reducing the Group's energy expenditure	ST	Internal	+

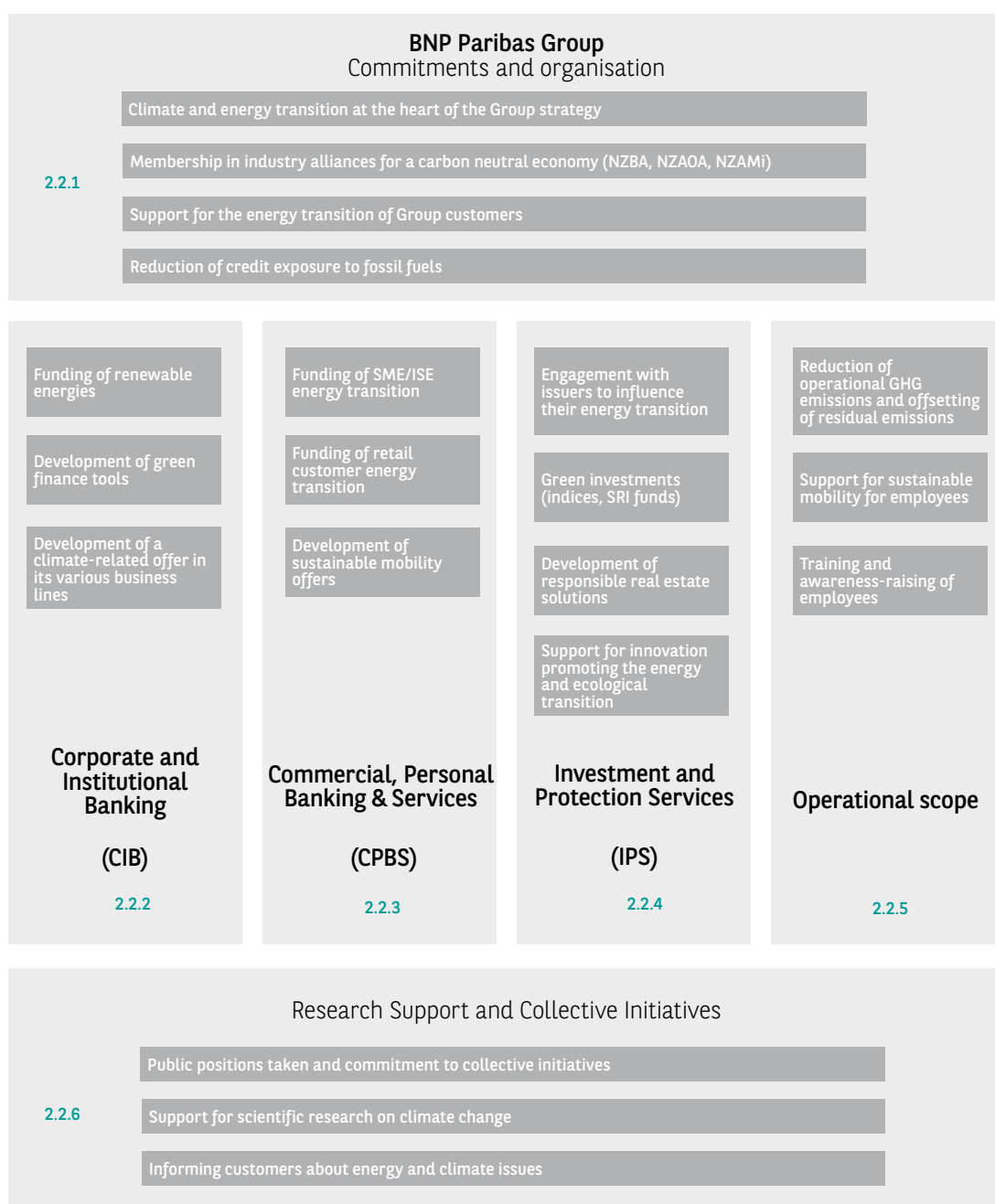


# 2.2

## BNP PARIBAS PLACES CLIMATE-RELATED ISSUES AT THE HEART OF ITS STRATEGY AND ACTIVITIES

The considerable challenges posed by climate change are factored in at all levels and in all businesses conducted by the company:

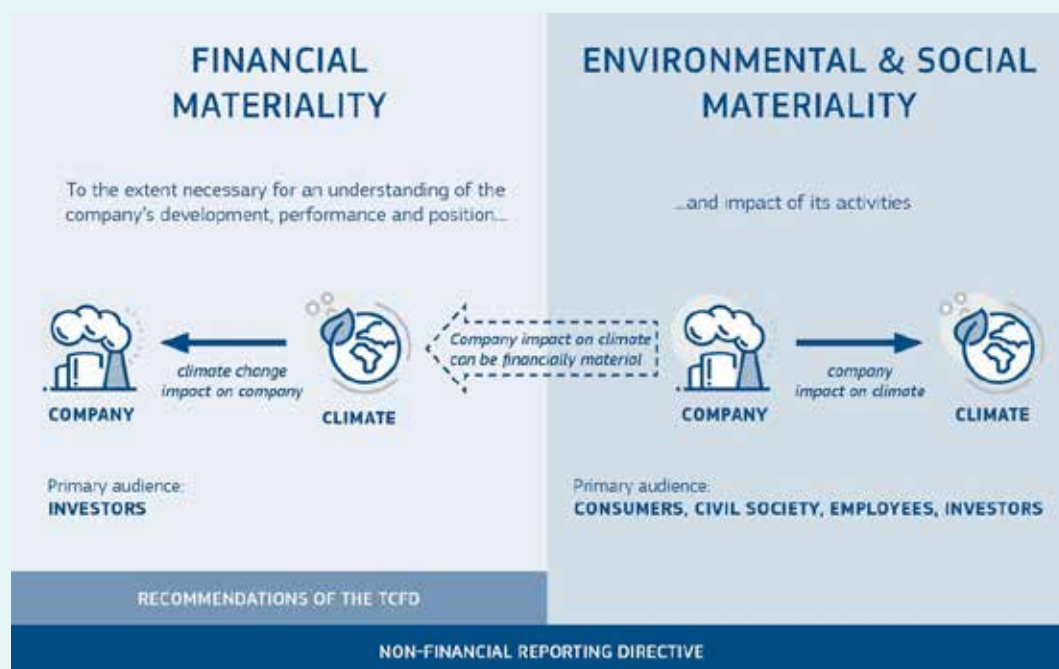
*Building on the many initiatives taken over more than 10 years to combat climate change, BNP Paribas formalised a new engagement and action framework in 2021. In terms of external engagement, BNP Paribas has formalised and strengthened its commitment to carbon neutrality by joining UNEP's Net Zero Alliances relevant to its activities (financing, investment for own account, asset management). Internally, the BNP Paribas Group has identified Sustainable Finance, largely focused on the transition to carbon neutrality, as one of the three pillars of its 2022-2025 strategic plan. Combined with quantified targets and a commitment to transparency, this ambitious multi-year plan will enable BNP Paribas to further accelerate its contribution to the transformation of the economy towards carbon neutrality by 2050.*



BNP Paribas' response to climate-related issues is based primarily on an analysis of the risks that climate change poses to its business and on identification of the opportunities associated with the ongoing transformation of the economy. However, **BNP Paribas also incorporates the direct and indirect impact of its activities on the climate in its approach**, for example by prioritising the highest-emitting sectors in its alignment approach and setting targets to reduce its direct impacts. In doing so, it is able to meet the requirements of the second pillar of materiality as formalised by the European Commission and detailed in **Inset 3** ("double materiality").



**Inset 3 | Double materiality approach**



Primarily developed in the Guidelines on Non-Financial Reporting published by the European Commission<sup>20</sup>, the purpose of the double-materiality approach is, when selecting non-financial information deemed material, to simultaneously consider the impact of climate change on the company's business and the company's impact on the climate.

The consideration of BNP Paribas' contribution to climate change is reflected in the fact that the Group focuses its efforts on the sectors responsible for generating the highest greenhouse gas emissions : BNP Paribas sets targets in terms of exiting or reducing business and starts its alignment approach on these sectors (fossil fuels, electricity generation and transport). In addition, one of the ten metrics in the Group's new CSR dashboard covers its direct impact (assessment of greenhouse gas emissions related to the energy consumption of buildings and business travel, in tCO<sub>2</sub>eq/FTE).

## 2.2.1. BNP PARIBAS COMMITS TO A CARBON-NEUTRAL ECONOMY BY 2050

The Group is working to achieve the ambition of aligning all of its activities with the goal of a carbon-neutral economy by 2050 in multiple ways:

- BNP Paribas has placed climate-related issues at the heart of its 2022-2025 plan;
- BNP Paribas joined the net zero alliances (NZBA, NZAQ, NZAMI) of the Glasgow Financial Alliance for Net Zero (GFANZ) and is gradually aligning its activities with the goal of carbon neutrality by 2050;
- BNP Paribas is supporting the energy transition of its customers;
- BNP Paribas is continuing to reduce its exposure to fossil fuels.

### BNP PARIBAS PLACES CLIMATE-RELATED ISSUES AT THE HEART OF ITS 2022-2025 PLAN

Energy and climate-related issues have been at the heart of the Group's CSR policy since 2011. Accordingly, its priority in terms of environmental responsibility is to ramp up the energy and ecological transition of BNP Paribas and its customers.

A further step was taken with BNP Paribas announcing its 2022-2025 plan, one of the goals of which is to direct financial flows into the investments needed for the transition to a more sustainable economy. Entitled *"Growth, Technology, Sustainability"* (GTS), the plan aims to accelerate and mobilise all of the Group's business lines around the challenges of sustainable finance (Figure 4).

Climate-related issues, combined under the theme of the transition to collective carbon neutrality, underpin the Sustainability pillar of BNP Paribas' 2022-2025 strategic plan.

Ambitious targets have been set:

- **Mobilise €350 billion by 2025** through loans and bond issues covering environmental and social topics, including €150 billion in sustainable loans and €200 billion in sustainable bonds;
- **Reach €300 billion in sustainable and responsible investments** under management by 2025.

Figure 4 | Breakdown of the Sustainability pillar of the 2022-2025 strategic plan



## BNP PARIBAS JOINED THE NET ZERO ALLIANCES (NZBA, NZAO, NZAMI) OF THE GLASGOW FINANCIAL ALLIANCE FOR NET ZERO (GFANZ) AND IS GRADUALLY ALIGNING ITS ACTIVITIES WITH THE GOAL OF CARBON NEUTRALITY BY 2050

The ambition announced by BNP Paribas in 2018 to align its activities with the objectives of the Paris Agreement was formalised and reinforced by the **decision to join the UNEP-Fi Net Zero Banking Alliance (NZBA) when it was launched on 21 April 2021**. To that end, BNP Paribas has undertaken to:

- **Align the greenhouse gas emissions arising from its credit and investment for own account activities with the path required to achieve carbon neutrality by 2050;**
- **Build on credible transition scenarios** published by recognised bodies (IPCC, IEA);
- **Focus on the most greenhouse gas emitting sectors** and playing a key role in the transition to a carbon neutral economy;
- **Set interim sector targets** by 2030 at the latest;
- **Annually publish its progress** and associated action plans.

In accordance with this ambition, certain Group entities have joined the other Net Zero initiatives combined under the Glasgow Financial Alliance for Net Zero (GFANZ). **BNP Paribas Cardif joined the Net Zero Asset Owner Alliance (NZAOA) in September 2021 and BNP Paribas Asset Management joined the Net Zero Asset Managers Initiative (NZAMI) in November 2021**. The two entities are thus committed to supporting the target of zero net greenhouse gas emissions by 2050.

Joining the Net Zero Banking Alliance is part of a process of aligning the loan book with the objectives of the Paris Agreement. In 2019, BNP Paribas undertook, alongside four other international banks, to deploy the PACTA<sup>21</sup> methodology and to measure the alignment of its loan book in five highly carbon-intensive sectors (fossil fuel extraction, electricity generation, transport, steel and cement). In 2020, BNP Paribas signed the Collective Commitment to Climate Action (CCCA), under the aegis of UNEP FI, and chose to share tools for aligning bank activities with the goals of the Paris Agreement.

By joining the Net Zero Banking Alliance, **BNP Paribas committed to expanding the scope of application of the alignment goal to include a larger number of sectors** (agriculture, retail real estate, commercial real estate) and **a higher ambition**: financing a neutral carbon world by 2050, which is coherent with limiting global warming to 1.5 °C compared to the pre-industrial era. The commitments made under the CCCA are now fully included in those of the NZBA.

The loan book target is being gradually rolled out. To date, BNP Paribas has set **interim 2025 targets for three of the highest-emitting sectors: electricity generation, oil & gas and automotive, as set out in section 4.2.1 (pg. 56)**. The associated methodology is briefly presented in **section 4.1.1** of this report (pg. 51) and in greater detail in a dedicated alignment report<sup>22</sup>.

## BNP PARIBAS SUPPORTS THE ENERGY TRANSITION OF ITS CUSTOMERS

One of the Group's main strategies for aligning its activities with a carbon neutrality objective is to support its customers in their own energy transition. To that end, BNP Paribas is continuing its commercial efforts to promote activities that have a positive impact on the environment, starting with those that are part of the energy and ecological transition.

This support takes several forms depending on the Group's different business lines, developed in the following sections (**2.2.2, 2.2.3, 2.2.4**): financing renewable energy or energy transition projects, developing green financing tools, supporting innovation and providing low-carbon investment solutions.

Drawing on the diversity of its expertise, the Group is able to offer a range of solutions, as illustrated below with the example of low-carbon hydrogen (**Inset 4**).

### Inset 4 | BNP Paribas' support for the development of low-carbon hydrogen

Low-carbon hydrogen, considered one of the components necessary for the emergence of a global energy system compatible with the ambition of the Paris Agreement on Climate, is an example of the variety of options offered by BNP Paribas for the deployment of a low-carbon solution. In 2021:

- The "BNP Paribas Energy Transition Fund" of BNP Paribas Asset Management invested in GenCell Energy, a company that develops off-grid hydrogen-powered generators;
- Portzampac, a subsidiary of BNP Paribas, helped two French companies raise funds in 2021 to develop their business: HRS, specialising in the design and installation of hydrogen charging stations, and Hydrogène de France, which combines the generation of electricity at solar power plants with hydrogen storage, either for use in off-grid generators or larger-scale power plants;
- On the demand side, BNP Paribas Leasing Solutions and BNP Paribas CIB completed the first long-term lease of trucks, provided by Hyundai, running on hydroelectricity-generated hydrogen.



## BNP PARIBAS CONTINUES TO REDUCE ITS EXPOSURE TO FOSSIL FUELS

The alignment of the Group's activities with a carbon neutrality trajectory also involves reducing support to fossil fuels:

- **In 2020, the Group announced a plan to reduce its thermal coal exposure to zero by 2030 in the OECD and EU countries, and by 2040 in the rest of the world.** The Group had already elected in 2017 not to finance any projects in the thermal coal sector. For each corporate client generating part of their electricity from coal, BNP Paribas determines to what extent the company's development trajectory is compatible with the Group's exit targets by geographic area. The Group has now ceased all business relationships with its corporate customers which have not adopted a thermal coal exit plan compatible with the Bank's commitments. At end-2021, BNP Paribas has decided to initiate the exit from half of its energy production clients, notably because they were still planning new thermal coal-based capacities and/or had not a carbon exit strategy in line with BNP Paribas' targets.

Accordingly, **BNP Paribas no longer accepts any new customers earning more than 25% of their revenue from thermal coal, developing new coal-fired electricity generation capacities, or developing new thermal coal extraction projects.**

- In 2021, the Group took a new commitment to reduce its credit exposure to the upstream oil and gas activities by 10% by 2025, raised to 12% in March 2022. In May 2022, this objective was reframed and strengthened by setting two enhanced targets:
  - **reduce our credit exposure to the upstream oil industry by -25% by 2025 versus 2020;**
  - **a 10% minimum reduction of the carbon emission intensity of our financings to upstream oil and gas and refining by 2025 versus 2020.**

These objectives compare favourably with the scenario NZE2050 of the International Energy Agency (IEA).

- In 2022, the Group also updated its financing policy on unconventional oil and gas, which has become an oil and gas policy, with a reinforcement of the criteria governing its financing and investments
  - **BNP Paribas strengthens its criteria and will no longer provide products and services and no longer invest in companies with more than 10% of their**

**activities in tar sands and shale oil and gas;**

- its definition of the Arctic was enlarged to the AMAP's (Arctic Monitoring and Assessment Program), with an exception made for Norwegian operated area;
- BNP Paribas will no longer finance or invest in companies with oil and gas reserves in the Amazon as well as the ones developing related infrastructures;
- BNP Paribas will exclude all financing and investment in new oil and gas project located in IUCN I to IV (in either Brazil, Ecuador, Bolivia, Colombia or Venezuela).

As a reminder, strong commitments had been taken in 2017 to restrict our financing and investments in the unconventional oil and gas sectors:

- BNP Paribas is amongst the first banks to have adopted a policy on unconventional oil and gas. Its credit exposure to unconventional oil and gas specialists decreased from over 4 billion dollars in 2016 to zero at the end of 2021;
- From that date, the specificity of the Arctic region is integrated into the sectoral policy of BNP Paribas on unconventional oil and gas.





## 2.2.2. CORPORATE AND INSTITUTIONAL BANKING (CIB): BNP PARIBAS SUPPORTS THE TRANSITION OF ITS CORPORATE AND INSTITUTIONAL CUSTOMERS

BNP Paribas Corporate & Institutional Banking (CIB) offers companies and institutions around the world a wide range of financial products and services tailored to their needs, combining the essential requirements of sustainable development with strict risk and regulatory control.

CIB has implemented three main types of pro-climate initiatives:

- financing the development of renewable energies;
- development of green financing and investment tools;
- development of a climate-related offer in its various business lines.

### BNP PARIBAS FUNDS THE DEVELOPMENT OF RENEWABLE ENERGIES

BNP Paribas has long supported the energy transition, having set the goal in 2015 of doubling the amount allocated to finance the renewable energy sector by 2020 to €15bn per year. **Reached in 2018, this target was raised to €18 billion by 2021, which itself was reached at 31 December 2021 (€18.6 billion).** In 2022, BNP Paribas has once again doubled its 2020 target of €15 billion to €30 billion by end-2025.

Among the year's achievements, BNP Paribas CIB served as co-arranger and co-coordinator for the syndication of the Vineyard Wind project in the United States, the first large-scale offshore wind farm in the country with a capacity of 800 MW (enough to supply more than 400,000 households). In China, BNP Paribas played several key roles (including Lead Arranger) in the establishment of joint venture TESS between TotalEnergies and Chinese renewable energy company Envision Energy, which aims to install 170 MW in rooftop solar panels in the country. In Abu Dhabi, BNP Paribas also played several key roles (Bookrunner & Lead Arranger) alongside EDF and JinkSolar on the Al Dhafra solar power plant deal, which is set to become the largest in the world.

### BNP PARIBAS DEVELOPS GREEN FINANCING AND INVESTMENT TOOLS

BNP Paribas has developed a variety of green finance tools in an effort to provide broader support for the energy and ecological transition of its customers, often used to accelerate the energy transition.

**In 2021, BNP Paribas was the world's No. 2 player on the green bond market** according to Dealogic (and No. 1 in EMEA), with €22 billion as bookrunner for its customers.

For example, in September 2021 BNP Paribas was joint bookrunner for the UK Green Gilt, the largest green bond issued by a government at £12 billion, aimed at accelerating the country's transition to carbon neutrality by 2050. The decision made by the Her Majesty's Treasury (HMT) is aligned with the government's Ten Point Plan for a Green Industrial Revolution, which seeks to protect the environment, stimulate green jobs and accelerate the economy's transition to net zero by 2050.

**BNP Paribas is also very active in the Sustainability-Linked Loans (SLLs) market.** With an SLL, the interest rate paid by the borrowing company is linked to the achievement of sustainable development targets, and particularly those related to the climate: rates are lowered if the company reaches its targets and increased otherwise. This type of loan thus encourages borrowers to improve their sustainable development performance over the duration of the loan.

**In 2021, BNP Paribas played a key role in SLLs amounting to €12.5 billion having as one of their objectives to reduce GHG emissions.** For example:

- BNP Paribas was arranger and joint bookrunner for the refinancing in dollars of an SLL issued by Mexican company Cemex, one of the world's largest cement producers, whose rate is indexed to the achievement of multiple environmental targets such as reducing net CO<sub>2</sub> emissions per metric ton of cement produced, increasing the percentage of green electricity in the cement manufacturing process and increasing the percentage of alternative fuels in this same process;
- The Group was also Joint Sustainability Coordinator in the AUD 1.3 billion SLL issued by Coles Group Limited, an Australian food retailer, indexed to metrics including the

reduction of greenhouse gas emissions. This SLL is the first issued by an Australian retailer.

### BNP PARIBAS CIB ACCELERATES THE DEVELOPMENT OF ITS CLIMATE-RELATED OFFER IN ITS VARIOUS BUSINESS LINES

In addition to its financing activities, BNP Paribas CIB supports the energy transition of its customers by providing climate-related solutions in the offers of its various business lines. Examples include:

- **In Transaction Banking, BNP Paribas offers green guarantees to its customers, reserved for projects with a positive environmental impact.** In 2021, for example, BNP Paribas issued a line of green guarantees to Engie Spain to support the development of its renewable energy business. This transaction was named Best Sustainable Trade Finance Solution 2021 by Treasury Management International;
- **In Capital markets, BNP Paribas launched a series of Paris Aligned Benchmark indices in 2021,** aimed at aligning the portfolio's emissions with the objectives of the Paris Agreement, i.e. an annual decrease of 7%. Four indices meeting the requirements of the European label (EU PAB) have been launched to date, for a total of around €300 million under management.

## 2.2.3. RETAIL BANKING AND SPECIALISED BUSINESSES (CPBS): BNP PARIBAS SUPPORTS THE TRANSITION OF SMES-ISES AND INDIVIDUALS

The Commercial, Personal Banking & Services (CPBS) division combines the BNP Paribas commercial banking networks and the business lines specialising in credit, financing and mobility. The commercial banking networks include CPBF in France, Fortis in Belgium, BNL in Italy, BGL in Luxembourg as well as the networks in nine other countries (Turkey, Ukraine, Poland, Senegal, Côte d'Ivoire, Algeria, Morocco, China and the

United States). The CPBS division also comprises business lines specialising in mobility (Arval Equipment), financing and leasing solutions (BNP Paribas Leasing Solutions), financing of individuals (BNP Paribas Personal Finance), digital banking services in Germany and India (BNP Paribas Personal Investors), and agile current accounts open to all (Nickel).

Each of these entities develops products and services designed to help its customers make their own energy transition:

- supporting SMEs and ISEs in their energy transition;
- support for the energy renovation of individual homes;
- contribution to the development of sustainable mobility offers.

### BNP PARIBAS SUPPORTS SMES AND ISEs IN THEIR ENERGY TRANSITION

Commercial & Personal Banking in France (CPBF) provides all corporate customers with solutions to help them with their ecological and energy transition. A comprehensive range of solutions was co-built with the Group's other business lines (Arval and BNP Paribas Leasing Solutions) and its partner Économie D'Énergie (EDE), centred on three areas in which corporate customers can undertake to reduce energy consumption: real estate, transport and mobility, and movable assets. CPBF specifically supports energy transition players by providing them with a centre of expertise, the Green Desk.

In Poland, BNP Paribas Bank Polska teamed up with the Polish development bank to launch a government guarantee called BiznesMax to secure loans granted to SMEs for the purpose of making innovative ecological investments. The guarantee covers projects involving the energy efficiency of buildings, renewable energy, process efficiency, electric mobility and the circular economy.



### BNP PARIBAS SUPPORTS THE ENERGY RENOVATION OF INDIVIDUAL HOMES

In its various countries of operation, the Group helps its customers undertake energy diagnostics and renovation work on their homes. CPBF co-developed the website "monprojetrenovation.com", offering a comprehensive range of services, from energy diagnostics to identification of eligible subsidies and tax credits. The division also offers ÉnergiBio preferred-rate home renovation loans. In November 2021, the volume of ÉnergiBio loans had doubled compared to 2020.

Also in France, BNP Paribas Personal Finance is continuing its alliance with EDF in Domofinance, one of the only two players in France offering financing for energy renovation projects tailored to community properties. In Paris, Domofinance supported a €12 million multi-building renovation with the aim of cutting its energy consumption in half. BNP Paribas Personal Finance has also developed offers in the UK and the Czech Republic to support customers in their renovation projects.

In Belgium, BNP Paribas Fortis offers preferred-rate green energy loans to fund renovations aimed at reducing energy consumption in homes. At end-2021, these green loans amounted to €3.57 billion, taking into account the latest interpretations of the European taxonomy. BNP Paribas also played a central role in the development of the Energy Efficient Mortgage Label, a European certification for loans used to fund the purchase, construction or renovation of a property meeting certain energy performance criteria.

In the UK, BNP Paribas Personal Finance launched multiple new innovative proposals, including a platform to connect customers and installation companies (certified by government organisation

TrustMarket) and a partnership with energy supplier E.ON, resulting in the offer of a combined energy efficiency diagnostic analysis and renovation loan.



### **ARVAL, BNP PARIBAS LEASING SOLUTIONS AND BNP PARIBAS PERSONAL FINANCE CONTRIBUTE TO THE DEVELOPMENT OF SUSTAINABLE MOBILITY OFFERS**

Supporting the development of more sustainable mobility is a major priority for BNP Paribas under its 2022-2025 strategic plan, and concerns many of the Group's business lines.

In the mobility sector, in France, a green auto loan at a preferred rate of 1% is offered to customers purchasing an electric bike or car eligible for the government's green bonus.

In Luxembourg, BGL BNP Paribas offers a green mobility loan: a preferred-rate personal loan dedicated to finance the purchase of an electric or hybrid rechargeable car, installation of the charging station at home and assistance with obtaining the government bonus.

In 2021, Arval launched new services in accordance with its strategic plan Arval Beyond, with one key ambition: to become a major player in sustainable mobility through the deployment of its 360° Mobility offer, an integrated sustainable mobility offer including electric bike leasing, carpooling, and micromobility services. At the same time, Arval completely overhauled its CSR strategy and set ambitious targets for 2025: 700,000 electric vehicles in the leasing fleet and a 35% reduction in the fleet's CO<sub>2</sub> emissions compared to 2020.

For its part, BNP Paribas Leasing Solutions developed a special financing solution for the installation of electric car charging stations to facilitate the adoption of low-carbon vehicles.

Lastly, BNP Paribas Personal Finance has taken two initiatives to promote access to more sustainable mobility: establishment of a platform to help select an eco-friendly vehicle (Green Car Simulator), and creation of a preferred-rate financing offer for low-income households interested in buying a low-emission vehicle.



## 2.2.4. INVESTMENT AND PROTECTION SERVICES (IPS): BNP PARIBAS SUPPORTS THE TRANSITION OF ITS INVESTMENT CUSTOMERS

The Investment & Protection Services division comprises BNP Paribas' activities dedicated to protection, savings, investment and real estate, centred on four business lines: insurance, protection and retirement with BNP Paribas Cardif, asset management with BNP Paribas Asset

Management, private banking for high net worth customers with BNP Paribas Wealth Management, and real estate services and investment with BNP Paribas Real Estate.

**In addition to the commitments made by BNP Paribas Asset Management and BNP Paribas Cardif by joining the Net Zero Alliances, these entities, each with its own specific characteristics, are deploying various lines of action to support the transition to a carbon-neutral economy by 2050 :**

- actions designed to influence issuers through a recognised voting policy and engagement;
- offering green investments to investment customers;
- development of an energy-efficient real estate offer;
- support, through investment, for innovation to promote the energy and ecological transition.

### ASSET MANAGERS INFLUENCE ISSUERS THROUGH A RECOGNISED VOTING POLICY AND ENGAGEMENT

**BNP Paribas Asset Management uses its voting rights to influence the energy transition of portfolio companies.** In its voting policy, BNP Paribas Asset Management **objects to the approval of financial statements, discharge or re-election of directors of any company failing to sufficiently disclose its CO<sub>2</sub> emissions and 1.5 °C strategy.**

In 2021, BNP Paribas Asset Management opposed 969 resolutions at 168 General Meetings (vs. 451 at 66 GMs in 2020), o/w 745 for climate-related reasons, and voted for 70 out of 79 shareholder climate-related proposals.

In particular, BNP Paribas Asset Management continued to set an example on the subject of climate lobbying by pushing companies to align their lobbying activities with the objectives of the Paris Agreement. Examples of how BNP Paribas Asset Management uses its voting rights are provided in [Inset 5](#).

**BNP Paribas Asset Management and Cardif engage in a dialogue on climate issues with portfolio companies, particularly within the Climate Action 100+ Initiative.** Climate Action 100+ investors collectively engage with the world's largest greenhouse gas emitters to encourage them to improve their governance in terms of climate change, to set greenhouse gas emission reduction targets consistent with the Paris Agreement and to promote the transparency of climate-related financial reporting. The initiative has generated concrete results; for example, Iberdrola's decision in 2021 to submit its climate strategy to a shareholder vote (via a say-on-climate resolution) marks the culmination of a constructive collaboration coordinated by BNP Paribas Asset Management for the Climate Action 100+ coalition.

**BNP Paribas Asset Management also works closely with sovereign debt issuers.** In Europe, the bond

#### **Inset 5 | Use of voting rights by BNP Paribas Asset Management**

In 2021, BNP Paribas Asset Management continued leading the way in engaging with companies to address climate change, pushing them to align their own lobbying efforts with the goals of the Paris Agreement. BNP Paribas Asset Management filed two shareholder resolutions on the alignment of climate lobbying with the objectives of the Paris Agreement at the Exxon Mobil and Delta Airlines General Meetings.

The two resolutions submitted by BNP Paribas aim to require the Boards of Directors of ExxonMobil and Delta Airlines to produce a report explaining the alignment of lobbying activities with the objectives of the Paris Agreement. For the second year in a row, ExxonMobil requested permission from the Securities & Exchange Commission (SEC) to omit the proposal. In 2021, BNP Paribas AM successfully defended the proposal with the SEC and then received a majority vote at the company's general meeting. For Delta Airlines, the proposal obtained a strong majority, after a vote of 46% in 2020. Resolutions filed with these companies received 64% and 63% of votes, respectively.

management team and the Sustainability Center's sovereign analyst engaged with Spain and the United Kingdom on climate-related issues, the maturity of their bonds or their performance on ESG metrics. For 2021, the portfolio management teams also engaged with the Office of Public Debt and Ministry of Finance in Chile to advise on an issue of green bonds, presented as an essential tool to achieve 30% reduction in CO<sub>2</sub> per unit of GDP by 2030.

BNP Paribas Asset Management's extensive engagement with issuers has earned the recognition of several organisations. For example, the 2021 Voting Matters survey of UK NGO ShareAction ranked BNPP Asset Management as the second most active manager in terms of using voting to support environmental and social issues, with 98% of votes in favour of the

ESG resolutions evaluated. In 2021, BNP Paribas Asset Management was also one of the three highest-rated asset managers (with a score of A+) by UK think tank InfluenceMap.



### BNP PARIBAS PROVIDES ITS INVESTMENT CUSTOMERS WITH GREEN INVESTMENT OPTIONS

BNP Paribas Asset Management offers a wide range of sustainability-linked funds, invested notably in alternative energies and energy efficiency. **BNP Paribas Asset Management funds with a sustainability objective and classified under Article 9 of the SFDR (Sustainable Finance Disclosure Regulation) represented €39 billion in assets under management at 31 December 2021.** These funds include thematic fund BNP Paribas Environmental Absolute Return (EARTH), an alternative long/short equity UCITS strategy that seeks to identify opportunities among companies facing significant environmental challenges, and BNP Paribas Energy Transition, a fund investing in energy transition opportunities stemming from growing energy demand, the changing energy mix and the need for energy-efficient solutions to combat climate change.

In its general fund, BNP Paribas Cardif makes investments with a positive impact on the environment in green bonds, financing projects with environmental objectives, funds with environmental themes (equity or bond funds, infrastructure funds, private equity funds, private debt funds, etc.), and real estate assets whose environmental performance is certified or labelled, and/or have a social or societal objective.

In terms of market value, **BNP Paribas Cardif France's assets under management in environmental themes amounted to €8.8 billion at end-2021.** The SRI approach continued to be rolled out internationally this year, with investments in the energy transition carried out in Italy and Luxembourg.

BNP Paribas Real Estate's asset management business also offers funds that address environmental issues. BNP Paribas Real Estate Investment Management (REIM) launched the first European real estate fund aimed at aligning with the Paris Agreement. This European Impact Property Fund (EIPF) has amassed €300 million in capital commitments from institutional investors. It aims to reduce greenhouse gas emissions associated with its investments by 40% in 10 years.

### BNP PARIBAS REAL ESTATE IS DEVELOPING A HIGH ENERGY PERFORMANCE REAL ESTATE OFFER

BNP Paribas Real Estate continued its efforts to reduce the greenhouse gas emissions of its products and services by publishing its low-carbon commitments on building materials and equipment used in real estate projects as

well as the energy consumption of constructed, renovated, managed and occupied buildings. 100% of its business in commercial real estate benefits from environmental certification through the two highest certification levels.

In Property Management, BNP Paribas Real Estate applies its expertise to the improvement of energy performance, reduction of operating emissions and optimisation of environmental performance of the buildings under its management through a range of services:

- Energy sales and management: audit of a building's energy performance and optimisation offer;
- Energy transition: helping owners and companies assess, monitor and fund the energy transition in the real estate sector;
- Initiatives to reduce the carbon footprint of real estate assets: energy management, optimised use of raw materials, advice on re-use of materials, renewable energy contracts;
- Environmental certifications and labels: analysis of the environmental specifications of assets and certification of buildings (BREEAM in-use, LEED EB & OM, HQE, ISO 50001, ISO 14001).

### BNP PARIBAS INVESTS TO SUPPORT INNOVATION FOR THE ENERGY AND ECOLOGICAL TRANSITION

Making the energy transition happen also means supporting the development of innovative technologies. The Group made a commitment in late 2015 to invest €100 million in young innovative companies in the energy transition sector and to help them grow. With that goal in mind, the Group created an energy transition venture capital team. Four and a half years after its first investment, BNP Paribas has invested in 11 start-ups and three funds focused on areas such as energy efficiency, energy storage, sustainable mobility, etc.

**In 2021, the Group earmarked a total of €250 million in equity to support green transition start-ups** and, together with the Solar Impulse Foundation, launched the BNP Paribas Solar Impulse Venture fund, which plans to invest €150 million in high-potential start-ups working to promote the ecological transition, in order to accelerate their development and help them scale up their operations. Established in Europe and the United States, the start-ups selected by the fund are assessed by the Solar Impulse Efficient Solutions label.



**The Group also assists ecological and energy transition start-ups with their IPOs or capital increases.** In 2021, specialised subsidiary Portzamparc BNP Paribas supported several companies in the sector, such as Waga Energy, a start-up dedicated to facilitating the injection of methane from household waste into gas networks, through a €110 million transaction that was quadruple oversubscribed.



## 2.2.5. BNP PARIBAS IS REDUCING ITS OPERATIONAL EMISSIONS AND RAISING EMPLOYEE AWARENESS

BNP Paribas also factors in climate change within its own scope of operations:

- BNP Paribas conducts a proactive policy aimed at reducing its GHG emissions and has offset its operational emissions<sup>23</sup> since 2017;
- BNP Paribas supports the sustainable mobility of its employees;
- BNP Paribas raises employee awareness and trains its staff in energy and climate-related issues.

### BNP PARIBAS CONDUCTS A PROACTIVE POLICY AIMED AT REDUCING ITS GHG EMISSIONS AND HAS OFFSET ITS OPERATIONAL EMISSIONS SINCE 2017

BNP Paribas has implemented a series of initiatives aimed at reducing its operational GHG emissions (direct emissions and indirect emissions related to energy purchases and business travel):

- **The Group is reducing its energy consumption**, and as of 2019 exceeded its goal of cutting GHG emissions by 25 % between 2012 and 2020. In 2021, the Group generated emissions of 284 ktCO<sub>2</sub>eq (versus 347 ktCO<sub>2</sub>eq in 2020), 88.5% of which attributable to energy used in its buildings, including information technologies, and 11.5% to business travel. Divided by the number of employees, the decrease was 16.6% compared to 2020, which had already recorded a 20% decrease compared to 2019. In addition to the consequences of the Covid-19 epidemic, there are three sources of emissions reduction over the long term: energy efficiency of buildings, energy efficiency of IT equipment and optimisation of business travel;
- At the same time, **the Group is gradually turning to low-carbon electricity** in all countries where it is available. Renewable electricity represented 37% of the Group's total electricity purchases in 2021, which can be attributed either to purchases of renewable electricity certificates or to direct use of renewable energy produced by Group buildings. This commitment has been enhanced with the establishment of exclusively renewable electricity PPAs (power purchase agreements).
- In addition to these initiatives, each year **BNP Paribas offsets residual GHG emissions** from the previous year for the entire Group. Including additional low-carbon electricity purchases, emissions stood at 214 ktCO<sub>2</sub>eq in 2020.

Thanks to all these initiatives, which have reduced the Group's energy consumption, decarbonised the energy consumed and offset its residual emissions, BNP Paribas has been carbon neutral since 2017 in its operational scope.

### BNP PARIBAS SUPPORTS THE SUSTAINABLE MOBILITY OF ITS EMPLOYEES

In order to promote the sustainable mobility of its employees, **BNP Paribas continued rolling out electric vehicle charging equipment at its sites and greening its fleets of company cars**. At end-2021, 100% electric or hybrid vehicles accounted for 16.8% of the Group's internal fleet, up significantly by 92% compared to 2020. In addition, employee offers were created to encourage staff to make a transition to sustainable mobility (discounts on purchases/leases, financing, special subsidy). In France, BNP Paribas SA decided to test out a "sustainable mobility package" in 2022, designed to encourage employees to commute to and from work by bike.

### BNP PARIBAS RAISES EMPLOYEE AWARENESS AND TRAINS ITS STAFF IN ENERGY AND CLIMATE-RELATED ISSUES

BNP Paribas firmly believes that it is vital to raise awareness and train employees, in both their personal and professional lives, to ensure that climate-related risks and opportunities are well-integrated in all Group business lines. Accordingly, **BNP Paribas has for the last several years increased the number of training and awareness-raising sessions on climate-related issues**, tailored to different audiences, for all its employees:

- Together with the CISL (Cambridge Institute for Sustainability Leadership) in England, the Group launched a "Sustainability Leaders" training programme, which centres much of its curriculum on climate-related issues and employs various teaching formats. Nearly 3,800 Group employees took part in this programme at end-2021, and nearly 1,200 more employees are currently doing the programme;

- The WeEngage training programme, a mini-series of training sessions focused on sustainable finance and current environmental challenges (including climate change), was launched in 2020. This programme, which can be taken in 5 languages by any of the Group's 190,000 employees, aims to help them develop skills in guiding customers towards a low-carbon economy and greater social justice. The 6th module, dedicated to achieving carbon neutrality, was released in 2021;
- A business line-specific programme covering financial institutions (FICs), consisting of 62 sessions covering 35 topics, also trained nearly 6,000 employees at end-2021;
- The Group also continued rolling out the Climate Fresk, a serious game about climate change organised as a series of collective intelligence workshops, at various entities. Though hampered by the health crisis in 2020 and 2021, this awareness-raising campaign has already been launched in twelve countries and reached 1500 employees.

In addition, BNP Paribas significantly expanded its ESG training offer in 2021. It now covers a broad scope of issues ranging from general awareness of major ESG challenges, including the energy transition, to expert training in ESG risk management systems and sustainable finance products and services. **In 2021, more than 70,000 sustainable development training courses were completed by over 40,000 employees, including nearly 45,000 courses addressing the fight against climate change.**

23 | Direct emissions, and indirect emissions related to energy purchases and business travel

## 2.2.6. BNP PARIBAS TAKES PART IN PUBLIC DISCUSSIONS AND SUPPORTS THE DISSEMINATION OF KNOWLEDGE

The Group's ambition to address the challenges of climate change is also reflected in its active participation in public discussions and support for the dissemination of knowledge:

- public positions taken and commitment to collective initiatives;
- support for scientific research on climate change;
- informing its customers about energy and climate issues.

### BNP PARIBAS TAKES PUBLIC POSITIONS AND COMMITS TO COLLECTIVE INITIATIVES

BNP Paribas firmly believes it is more effective to address the complex and global challenges of climate change by working together. With that in mind, the Group is a member of several coalitions on the front line of the fight against climate change, such as:

- The Breakthrough Energy Coalition, launched at COP21 by Bill Gates to support innovation in the development of clean energy;
- The work of the Women's Forum on women and climate change, with extensive involvement in the study published in March 2021, "Women leading the green recovery".

BNP Paribas is also a member of multiple CSR think tanks, several of which focus specifically on climate-related issues:

- The Institute for Sustainable Development and International Relations (IDDRI), counting BNP Paribas' Head of CSR Laurence Pessez as Vice-President and a member of its Board of Directors;
- The World Business Council for Sustainable Development (WBCSD), a global organisation of more than 200 top-tier companies working together to accelerate the transition to a sustainable world. BNP Paribas is notably involved in the task force dedicated to climate policy;
- Entreprises pour l'Environnement (EpE), a non-profit that appointed BNP Paribas Director and CEO Jean-Laurent Bonnafé as its Chairman in 2019 for a three-year term. In this role, he helped publicly promote EpE's actions and reports, including the study "ZEN 2050 - Imagining and building a carbon-neutral France";
- The Hydrogen Council, which brings together more than 130 major global corporations in energy, transport and industry. BNP Paribas officially joined the Council in early 2020 and is represented by a member of the Executive Committee;
- H2Global, an initiative with a German government grant of more than €900 million to support the deployment of hydrogen through a mechanism guaranteeing purchase volumes for producers and maximum prices for low-carbon hydrogen users;
- The Financial Services Task Force (FSTF) created by the Sustainable Markets Initiative (SMI) in 2020 at the initiative of The Prince of Wales. Bringing together several of the world's largest banks, this task force is dedicated to accelerating efforts in the financial services sector to progress towards a "net-zero carbon" economy. In particular, the FSTF has drafted a methodology guide to the implementation of Net Zero strategies by banks.

Lastly, BNP Paribas actively participates in:

- The European Commission's work on sustainable finance. In 2021, BNP Paribas was represented in the working group focused on the data and implementation of the EU Platform on Sustainable Finance, which is responsible in particular for working on the European taxonomy;
- The Climate Commission of the French Banking Federation (FBF), with the aim of supporting and accelerating the climate strategies of French banks;
- The Climate Action 100+ Initiative, through which BNP Paribas Asset Management, joined by BNP Paribas Cardif in 2021, has been conducting a dialogue with companies in Europe since 2017;
- The Linux Foundation's Open Source Breakthrough for Climate Smart Investing (OS-Climate) programme, which BNP Paribas joined in March 2021 as a founding member. This platform offers a solution to help align financial investments climate-related goals, through open-source access to high-quality data and simulations on climate-related risks and opportunities.



## BNP PARIBAS SUPPORTS SCIENTIFIC RESEARCH ON CLIMATE CHANGE

The BNP Paribas Foundation contributes to scientific research programmes in the fields of climate change and biodiversity. The Foundation donates in particular to two patronage programmes:

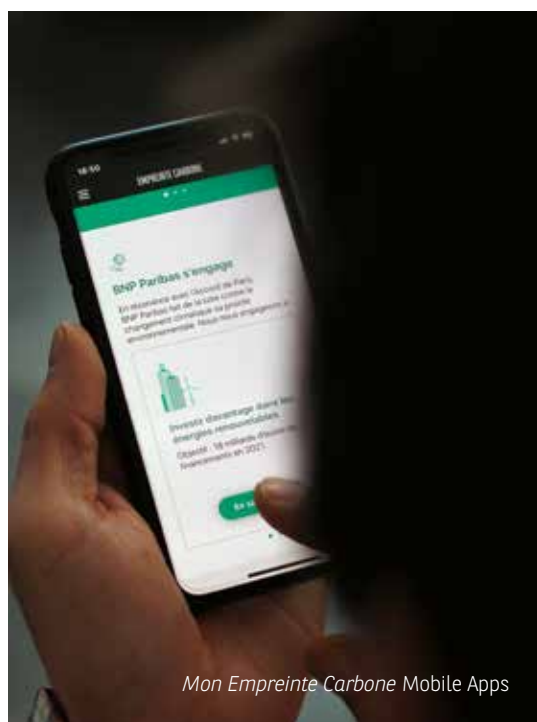
- Climate & Biodiversity Initiative, an international sponsorship programme launched in 2010 that supported 27 research projects and over 400 researchers with €18 million in aid. In 2021, the BNP Paribas Foundation continued to monitor and promote the nine winning projects selected via the fourth call for projects launched in 2019; a new call for projects will be launched in 2022;
- One Planet Fellowship, a sponsorship programme aimed at creating an intergenerational community of African and European researchers working on adaptation to climate change in Africa's agricultural sector.

In addition, in 2021, the 1<sup>st</sup> assessment of the partnership with the Tara Ocean Foundation signed in 2020 has been drawn up: €1.65 million were donated to the project at the end of 2021 (total for 2020 and 2021) by BNP Paribas Private Banking (France), with the aim of building the Tara International Polar Station, which will lead drift expeditions starting in 2023 to study and highlight the effects of climate change in the Arctic.

## BNP PARIBAS INFORMS ITS CUSTOMERS ABOUT ENERGY AND CLIMATE-RELATED ISSUES

BNP Paribas frequently holds targeted customer events centred on the ecological and energy transition. In 2021, these events focused in particular on the challenges and opportunities associated with the pursuit of collective carbon neutrality. In October 2021, BNP Paribas conducted an online edition of the Sustainable Future Forum (SFF), featuring more than 100 speakers and followed worldwide by 2,200 participants.

BNP Paribas also engages with its retail customers. French Retail Banking developed with the French start-up Greenly the *Mon Empreinte Carbone* (My Carbon Footprint) app, for use with the MaBanque BNPP and Hello bank! apps, to enable customers to estimate the carbon footprint of their daily expenses. At Findomestic in Italy, a credit card app was set up, in partnership with Swedish firm Doconomy. In Poland, BNP Paribas Bank Polska offers a multi-bank expense management tool, GreenUp, which helps its customers reduce their greenhouse gas emissions and raises their awareness of the use of water associated with the products they purchase.



*Mon Empreinte Carbone Mobile Apps*

# 2.3

## RESILIENCE OF THE GROUP STRATEGY IN VARIOUS CLIMATE SCENARIOS

Climate deregulation is generating sizeable impacts on human activities and affecting all economies, business sectors and geographic areas over the short, medium and long term. They are also highly uncertain, as demonstrated by the wide variety of scenarios defined to describe the potential consequences in the decades to come, both from a socio-economic development standpoint and in terms of the physical parameters describing climate change.

BNP Paribas' response to these challenges and uncertainties is written into a continuous improvement process, which evolves as changes take place in the general economic environment, scientific advances are made and organisational adjustments are implemented in the Group. BNP Paribas is continuously building and enhancing the resilience of its strategy and activities by adapting them to these changing circumstances.

**The Bank's resilience is underpinned by its diversified, integrated business model.** The diversity of the Group's business lines, the business sectors in which the Group operates and the geographic areas in which it is established is a key asset to mitigate risks of all kinds, whether they are transition or physical risks.

BNP Paribas takes climate change risks and opportunities into account at all levels of its business and

in its risk management, as detailed throughout this report. Several elements can be highlighted as contributing significantly to the Group's resilience to climate-related risks:

- **integration of the transition to carbon neutrality at the heart of the Group's 2022-2025 strategic plan and the commitment to align its activities with a carbon neutrality trajectory by 2050.** Formalized by the Group's membership in the Net Zero Banking Alliance, BNP Paribas Cardif's membership in the Net Zero Asset Owner Alliance and BNP Paribas Asset Management's membership in the Net Zero Asset Manager Initiative, this approach helps reduce the Group's exposure to economic players responsible for generating the highest GHG emissions, and thus its exposure to transition risks, particularly those related to changes in public policies aimed at reducing emissions;
- **enhancement of the Group's capacity to assess and assume climate-related risks** and incorporate them in its decisions. Described in Chapter 3, these systems help to better understand and reduce physical risks and transition risks;
- **expansion of teams dedicated to supporting customers in their transition** (e.g. Low Carbon Transition Group), aimed at helping the Group better seize the opportunities associated with the low-carbon transition.

**The assessment of the Group's actual resilience to the consequences of climate change is a complex task,** due in particular to the wide variety of possible climate scenarios. Within the Group, these scenarios are mainly used in two separate processes: the alignment of activities with carbon neutrality trajectories, in accordance with the Net Zero alliances, and the performance of climate stress tests, requested in particular by the banking supervisors. BNP Paribas systematically relies on benchmark scenarios published by recognised international bodies (see [Table 4](#) for the main examples).





Table 4 | Main benchmark scenarios used by BNP Paribas for climate change issues

ORGANISATION	MAIN SCENARIOS USED BY BNP PARIBAS		TIME FRAME	ASSOCIATED GLOBAL WARMING (2100)	MAIN USES WITHIN BNP PARIBAS
INTERNATIONAL ENERGY AGENCY (IEA)	NETZERO 2050 (NZE)		2050	1.5°C	- Alignment of the loan book (power generation, oil and gas, automotive, in particular)
	SUSTAINABLE DEVELOPMENT SCENARIO (SDS)		2050	< 2°C	
	BEYOND 2°C SCENARIO (B2DS)		2050	< 2°C	
NETWORK FOR GREENING THE FINANCIAL SYSTEM (NGFS)	DISORDERLY	Divergent Net Zero	2050	1.5°C	- Climate scenario analysis/Climate stress tests
		Delayed transition	2050	1.8°C	
	ORDERLY	NetZero 2050	2050	1.5°C	
		Below 2°C	2050	< 2°C	
	HOT HOUSE WORLD	Nationally Determined Contributions (NDC's)	2050	approx. 2.5°C	
		Current Policies	2050	3°C+	
INTERNATIONAL MARITIME ORGANIZATION (IMO)	GHG STUDY SCENARIO RCP 2.6 SSP2		2100	2°C	- Alignment of the loan book (shipping, in accordance with the Poseidon Principles)
INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)	SSP1-2.6		2100	1.8°C	- Indirectly, via the scenarios developed by the organisations listed above - Physical risks
	SSP2-4.5		2100	2.7°C	
	SSP5-8.5		2100	4.4°C	

The diversity of scenarios used provides more accurate coverage of certain sectors (e.g. shipping with the IMO, energy sector with the IEA, etc.) and addresses several scenarios in terms of global warming and the speed of adaptation of the global economy. This diversity makes it possible to analyse the Group's resilience to a variety of situations.

#### Portfolio Alignment

In this approach, the primary objective is to align the emissions generated by the funding of high-emission sectors in the loan book - starting with power generation, oil and gas, and automotive - with the trajectories required to achieve carbon neutrality by 2050. The results of this approach, presented in [section 4.1](#), are encouraging: for example, the analysis of the BNP Paribas portfolio in the electricity generation sector showed that, thanks to its long-standing commitment to renewable energies and restrictions on coal, the average emissions of the electricity mix financed by the Group, in CO<sub>2</sub>/kWh, at the end of 2021, were close to half of the global average (according to the IEA's World Energy Outlook) and among the lowest in the banking sector.

#### Assessment of financial impacts

The potential financial impacts for the Bank and its customers of the various potential climate futures are estimated through the impacts of various scenarios on economic activity, revenues, costs, investment amounts and debt ratios within the various business sectors, as well as physical risk events.

Exercises based on scenarios have increased in number and diversity, according to the assumptions on which they are based (some scenarios present greater physical risk, others opt for an immediate and very pronounced transition risk profile, while others moderate physical risk and transition risk) and according to their objectives.

In 2020 and 2021, BNP Paribas took part in the pilot programme conducted by the French Prudential Supervision and Resolution Authority (ACPR), which applied "shocks", taken from different NGFS climate risk scenarios (see [Figure 8](#), pg. 39), to the risk parameters. The objective was to estimate the possible impact of the transition and physical risk on bank balance sheets and in terms of expected loss. In early 2022, BNP Paribas took part in a European exercise supervised by the ECB (see also [Section 3.2.1](#)).

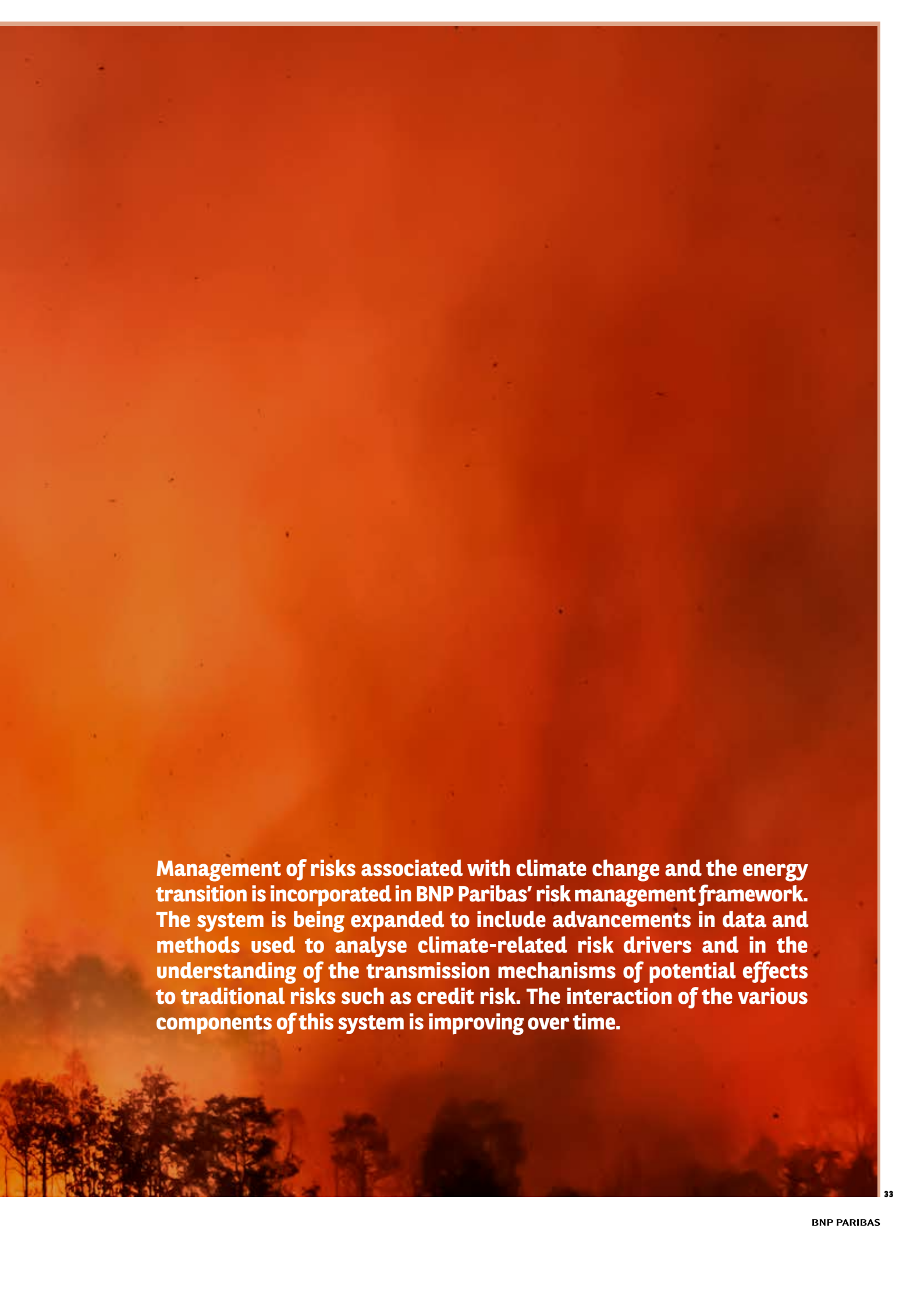
**All the exercises carried out at this stage show relatively limited impacts on Group portfolios, thanks in large part to its diversified business model.**



# 3

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## **RISK MANAGEMENT IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF CLIMATE-RELATED RISKS**



**Management of risks associated with climate change and the energy transition is incorporated in BNP Paribas' risk management framework. The system is being expanded to include advancements in data and methods used to analyse climate-related risk drivers and in the understanding of the transmission mechanisms of potential effects to traditional risks such as credit risk. The interaction of the various components of this system is improving over time.**

# 3.1

## PROCESS USED TO IDENTIFY AND ANALYSE CLIMATE-RELATED RISKS

### 3.1.1. CLIMATE-RELATED RISKS ARE INCLUDED IN THE BNP PARIBAS RISK IDENTIFICATION PROCESS

*The way in which BNP Paribas' risk identification and analysis processes take into account the risks associated with climate change is improving every year. In 2021, emphasis was placed on strengthening the Group's risk identification system, Risk ID, and the forward-looking risk assessment that supports this system. The results of this analysis and a climate scenario were taken into account in the Group's internal risk assessment and capital adequacy framework.*

The three risks related to climate change (physical, transition and responsibility risks presented in 2.1) are analysed as part of the Group's risk identification process in the form of risk drivers:

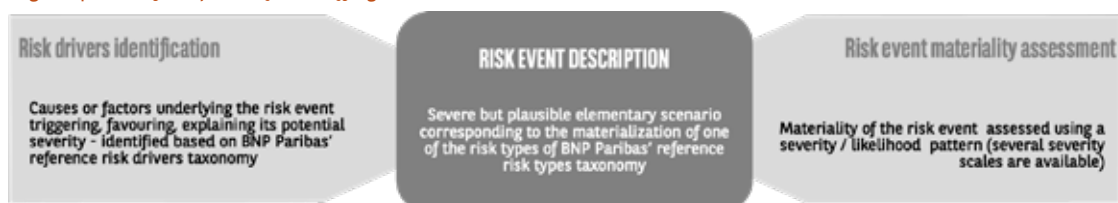
- Multiple environmental risk drivers are used to integrate climate considerations in the risk identification process;
- Climate-related risk drivers are reflected in strategic and commercial risks, credit risks, and to a lesser extent, operational and reputational risks;
- Climate-related risks are incorporated in the forward-looking risk assessment.

#### MULTIPLE ENVIRONMENTAL RISK DRIVERS ARE USED TO INTEGRATE CLIMATE CONSIDERATIONS IN THE RISK IDENTIFICATION PROCESS

The consequences of climate change are incorporated as risk drivers in the process for identifying and assessing risks incurred by BNP Paribas. Covering the whole Group, the Risk Inventory, which is the outcome of the Risk ID process, consists of a set of "severe but plausible" elementary scenarios (called "risk events") that could affect the Group and its entities, taking into account their business model, activities, internal operations and environments.

Each risk event is characterized by one or several risk drivers liable to cause, favour or aggravate it and by the assessment of its materiality, based on its severity and frequency (Figure 5). It is then possible to appreciate the relative importance of the risk drivers, including the ones linked to climate change, in BNP Paribas Risk Inventory.

Figure 5 | Three key components for identifying risks



The taxonomies used as referential in Risk ID methodology are very detailed: 102 types of risk (strategic, credit, market risks, etc.) are potentially affected by a list of 109 risk drivers (macroeconomic, environmental, related to social and governance, etc.). These risk types and drivers are combined at more aggregated levels (on a total of three levels) and these taxonomies evolve based on methodology changes, the emergence of new risk types and drivers, or new regulatory requirements.

In line with EBA<sup>24</sup> and ECB<sup>25</sup> recommendations, **the Risk ID process was strengthened in 2021** in order to better assess how climate change risk drivers could translate into risk events with significant financial or non-financial impacts for the Group. In Risk ID, risk drivers related to climate change are included among the environmental, social and governance (ESG) risk drivers. They are presented in **Table 5**.

**9 of the 13 identified environmental, social and governance risk drivers are, in whole or in part, related to climate change.** These risk drivers may be chosen by Risk ID contributors as being liable to affect BNP Paribas' financial or non-financial risks (commercial risk, credit risk, strategic risk, operational risk, etc.) through risk events.

Table 5 | Climate-related risk drivers in the broader analysis of ESG risk drivers

LEVEL 1 TYPE OF RISK DRIVER	LEVEL 2 TYPE OF RISK DRIVER	LEVEL 3 TYPE OF RISK DRIVER	RELATION TO CLIMATE CHANGE
<b>ENVIRONMENTAL, SOCIAL AND GOVERNANCE DRIVERS</b>	<b>PHYSICAL RISK DRIVERS RELATED TO CLIMATE CHANGE</b>	Acute physical impact of climate change	Yes
		Chronic physical impact of climate change	Yes
	<b>TRANSITION RISK DRIVERS RELATED TO CLIMATE CHANGE</b>	Transition to a low-carbon economy to mitigate climate change - policy changes	Yes
		Transition to a low-carbon economy to mitigate climate change - technological changes	Yes
		Transition to a low-carbon economy to mitigate climate change - behavioural changes	Yes
	<b>OTHER ENVIRONMENTAL RISK DRIVERS</b>	Loss of biodiversity, soil degradation and other nature-related risk drivers	Partially
		Pollution and other environmental risk drivers	Partially
	<b>SOCIAL RISK DRIVERS</b>	Human Rights (local communities and consumers)	No <sup>26</sup>
		Human Rights (labour)	No <sup>26</sup>
		Other social risk drivers	No <sup>26</sup>
	<b>GOVERNANCE RISK DRIVERS</b>	Governance risk drivers related to inadequate management of E&S risks	Partially
		Non-compliance with corporate governance frameworks or codes	No
	<b>CONSEQUENCES IN TERMS OF ESG LIABILITY</b>	Consequences of ESG liability	Partially

## CLIMATE-RELATED RISK DRIVERS ARE REFLECTED IN STRATEGIC AND COMMERCIAL RISKS, CREDIT RISKS AND, TO A LESSER EXTENT, OPERATIONAL RISKS

The potential connections between climate change risk drivers and the materialization of traditional types of risks are varied, as presented in **Figure 6** below.

Figure 6 | Transmission between climate risk drivers and traditional banking risks



24 | Report of the European Banking Authority on the "management and supervision of ESG risks by credit institutions and investment firms" (EBA/REP/2021/18)  
25 | European Central Bank's "Guide on climate-related and environmental risks" (Nov. 2020)

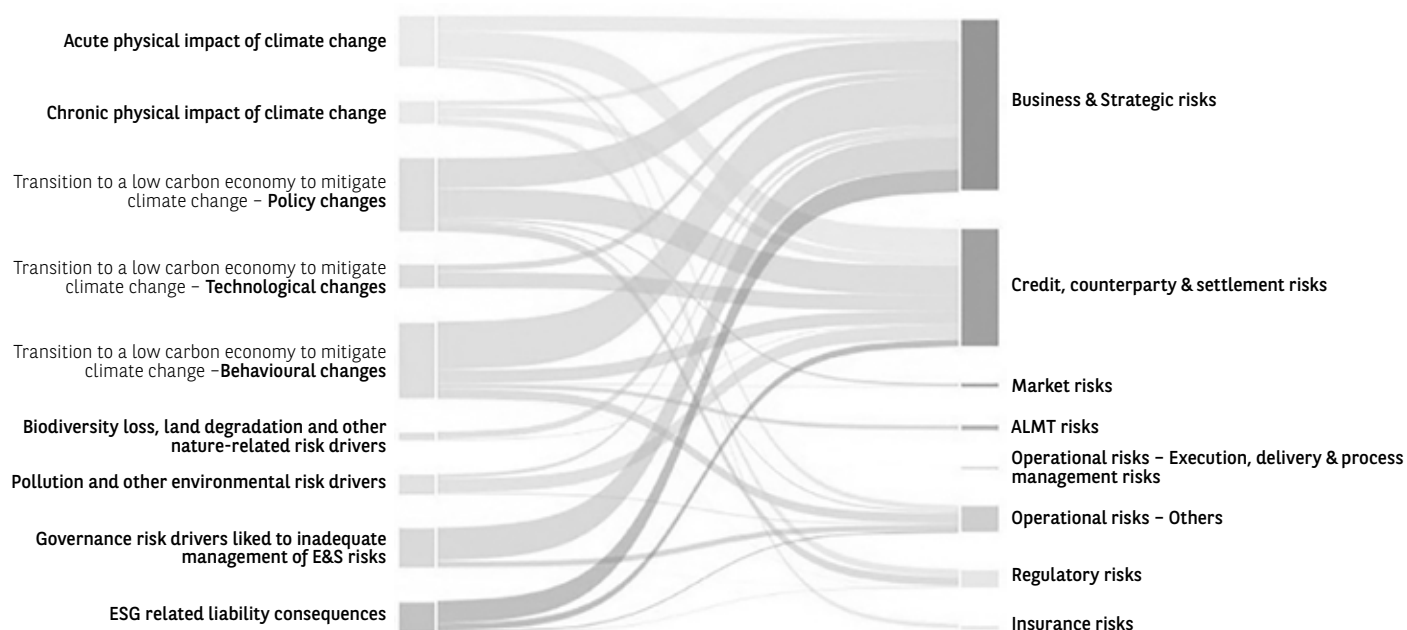
26 | More indirect links between climate change and impacts social tensions (social tensions, migration, employment for example), are not currently explicitly covered by Risk ID





The Sankey diagram below was taken from the 2021 Risk ID exercise. It represents the materiality relationship between the 9 climate-related risk drivers and the types of risks they affect. The thicker the line between a risk factor and a type of risk, the greater the materiality relationship.

**Figure 7 | Materiality of climate drivers on risks**



The types of risks most affected by climate change risk drivers are **Business & Strategic risks** and **Credit risks** and, to a lesser extent, **operational risks**. The analyse of the risk events that, in 2021 Risk Inventory, are caused, favoured or aggravated by risk drivers linked to climate change enabled to describe the way physical and transition risk drivers related to climate change could affect the bank ([Table 1](#) and [2 of section 2.1.1](#)).

Over a 3-year time horizon, which corresponds to the Bank's financial planning, climate-related risk drivers are not seen as predominant; they are however not negligible and even represent, for certain risk types, significant explanatory factors.



**CLIMATE-RELATED RISKS ARE INCORPORATED IN THE FORWARD-LOOKING RISK ASSESSMENT** The issue of the time frame to be considered in the risk identification process is complex and important. The three-year time frame considered in Risk ID, determined in line with the bank's financial planning period, may be inappropriate with respect to the apprehension of medium and long-term changes associated with climate change. Accordingly, Risk-ID contributors are invited to identify and assess risk events that are deemed relatively improbable in the short term but the impact of which will increase over time and which, for this reason, represent a significant preoccupation and have to be integrated in the Group Risk Inventory.

**To help them in this forward-looking exercise, a global overview of major banking sector risk factors in the short, medium and long term is established by BNP Paribas and provided annually to Risk ID contributors.** Validated by the RISK function's Risk Anticipation Committee, this overview identifies economic, technological, commercial, socio-political and environmental developments, trends and threats, as well as the growing interdependencies liable to exacerbate risks.

The 2021 overview included 31 major risk factors, five of which are directly or indirectly related to climate change. They are shown in the following table:

ENVIRONMENTAL AND SOCIETAL FACTORS	SEVERITY	IMPACT TIME	FUTURE TREND	STRUCTURAL OR CYCLICAL	SYSTEMIC HARM
<b>CLIMATE CHANGE ENERGY TRANSITION</b>	<b>VERY HIGH TO EXTREMELY HIGH</b>	Short/Medium/Long term	↑	Structural	Yes
<b>ENVIRONMENT AND HEALTH</b>	<b>HIGH TO VERY HIGH</b>	Short/Medium/Long term	↑	Structural	Yes
<b>BANKS AND ESG RISKS</b>	<b>HIGH TO VERY HIGH</b>	Short/Medium/Long term	↑	Structural	No
<b>INCREASING INEQUALITY AND SOCIETAL FRAGMENTATION</b>	<b>HIGH</b>	Short/Medium/Long term	↑	Structural	No
<b>EMPLOYEE EXPECTATIONS AND ENGAGEMENT</b>	<b>HIGH</b>	Short term	↑	Structural	No

The main environmental and climate-related findings of this overview are as follows:

- Banks are facing unprecedented climate risks, which require innovations in terms of modelling, particularly for physical risks;
- Physical collateral may be affected by climate change and insurance coverage may prove insufficient;
- Exposures to high-emission companies account for 14% of the banking sector balance sheets in the Eurozone, with a concentration in the manufacturing, electricity, transport and construction sectors;
- The analysis of long-term scenarios suggests the possibility of credit and market losses caused by a delayed or insufficient transition;
- Reputational risks in the event of non-compliance with ESG obligations or commitments (by the bank itself or its customers) could result in fines, loss of opportunities and a negative impact on revenues.

**Risk ID contributors can also rely on forward-looking analysis conducted by the Industry Research ("EIS") team.** This analysis focuses on key trends and their sectoral impacts, in order to assess the corresponding evolution of risks and opportunities for corporate customers over the next five to ten years.

It covers environmental risks, including climate-related and energy transition risks, as well as associated risks such as water scarcity. In particular, the latest forward-looking analysis addressed the following topics: Industries sensitivity to energy transition (2019), Impacts of water scarcity on industries (2020), Transition to carbon neutral industries (2021).

The "Transition to carbon neutral industries" study, based in particular on the IEA's SDS scenario, assesses the decarbonisation sensitivity of fourteen high emitting sectors along two dimensions: their technological maturity, and pressure to transition (regulation, impact of carbon prices, pressure from customers and stakeholders, etc.). For each industry, it details the extent to which the main known technological enablers will help reduce greenhouse gas emissions, with an analysis of their strengths and weaknesses in the medium to long term (electrification, renewable energy, bioenergy, hydrogen/synthetic fuels, carbon capture, energy efficiency, etc.).

In addition to its use in the Risk-ID, this analysis is widely used by the Bank as a whole, notably to perform individual analysis of its corporate customers and to define sector-based strategies relating to the energy transition.

### 3.1.2. BNP PARIBAS INCORPORATES CLIMATE-RELATED RISKS IN ITS SCENARIO-BASED ANALYSIS SYSTEMS FOR CLIMATE STRESS TESTING PURPOSES

Scenario-based analysis, which is central to the assessment of BNP Paribas' risks, incorporates climate-related risks:

- BNP Paribas participates in the climate risk simulation exercises conducted by banking supervisors and regulatory authorities and contributes to methodology discussions in the financial sector;
- Climate-related aspects are included in the scenarios used to assess the robustness of the bank's activity in response to various shocks;
- BNP Paribas takes climate-induced risks into account in the Group's internal capital adequacy assessment process (ICAAP).

#### BNP PARIBAS PARTICIPATES IN THE CLIMATE RISK SIMULATION EXERCISES CONDUCTED BY SUPERVISORS AND REGULATORY AUTHORITIES AND CONTRIBUTES TO METHODOLOGY DISCUSSIONS IN THE FINANCIAL SECTOR

BNP Paribas participates in climate risk simulation exercises organised by supervisors and regulators such as the ACPR and the Banque de France in 2020 and the ECB in 2022.

The climate risk stress test launched by the ECB in January 2022, designed to assess the extent to which banks are prepared to deal with the financial and economic shocks stemming from climate risk, consists of three separate modules<sup>27</sup>: (i) a questionnaire on bank performances in terms of the climate stress test, (ii) peer-to-peer benchmarking to assess the sustainability of bank business models and exposure to high-emission companies, and (iii) a bottom-up stress test.

This test uses macro-financial scenarios based on the scenarios prepared by the NGFS. They reflect possible future climate policies and assess both physical risks such as heat waves, droughts and floods, as well as short- and long-term risks arising from the transition to a greener economy. This work will be refined and

strengthened - particularly in terms of taking physical risks into account. In this regard, BNP Paribas benefits from the support of an academic chair dedicated to climate stress testing, in partnership with Ecole Polytechnique.

In addition to taking part in exercises organised by the regulatory authorities, BNP Paribas has since 2019 contributed to the work of the Climate Financial Risk Forum (CFRF), launched by the Prudential Regulation Authority (PRA) and the Financial Conduct Authority (FCA). The CFRF brings together key players in the financial sector. After publishing an initial guide June 2020 for smaller institutions, the CFRF drafted a second "practical" guide on the use of regulatory scenarios, published just before the Glasgow COP26 summit in late 2021.

Lastly, as a member of national, European and international professional banking organisations, BNP Paribas actively participates in industry-wide efforts to promote greater convergence of climate-related risk analysis methodologies.

#### CLIMATE-RELATED ASPECTS ARE INCLUDED IN THE SCENARIOS USED TO ASSESS THE ROBUSTNESS OF THE BANK'S ACTIVITY IN RESPONSE TO VARIOUS SHOCKS

Participation in these regulatory exercises and methodology discussions, the risk identification and assessment process conducted by Risk ID and the work of the RISK Anticipation Committee from the RISK function contributed to the creation of an internal analysis model that takes climate scenarios into account.

The following modelling components have been developed for the purposes of transition credit risk analysis:

- Macroeconomic impacts and sector breakdowns (revenues, costs) of a carbon tax shock and higher energy prices;
- Projected investment requirements to complete the transition;
- Projected revenues, costs and balance sheet structure at the customer level (based on sector trajectories, customer financial statements at the starting point and the level of carbon emissions);
- Dynamic risk reassessment based on projected financial statements.





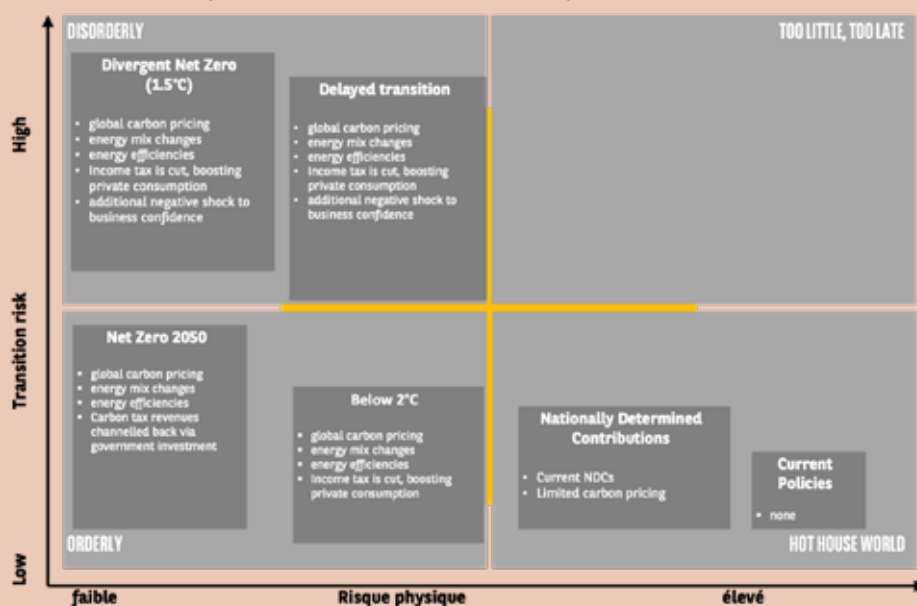
The analysis of climate scenarios is mainly based on the scenarios published by official institutions - the IEA and the Network for Greening the Financial Sector (**Inset 6**), which counts the European Central Bank as a member. Both

institutions have calculated 2050 greenhouse gas emissions trajectories, each corresponding to more or less extreme global warming scenarios.

#### Inset 6 | NGFS Scenarios

The NGFS uses six scenarios, divided into three categories (**Figure 8**).

Figure 8 | Framework of NGFS scenarios (Source: STFS/MR&S on NGFS documentation)

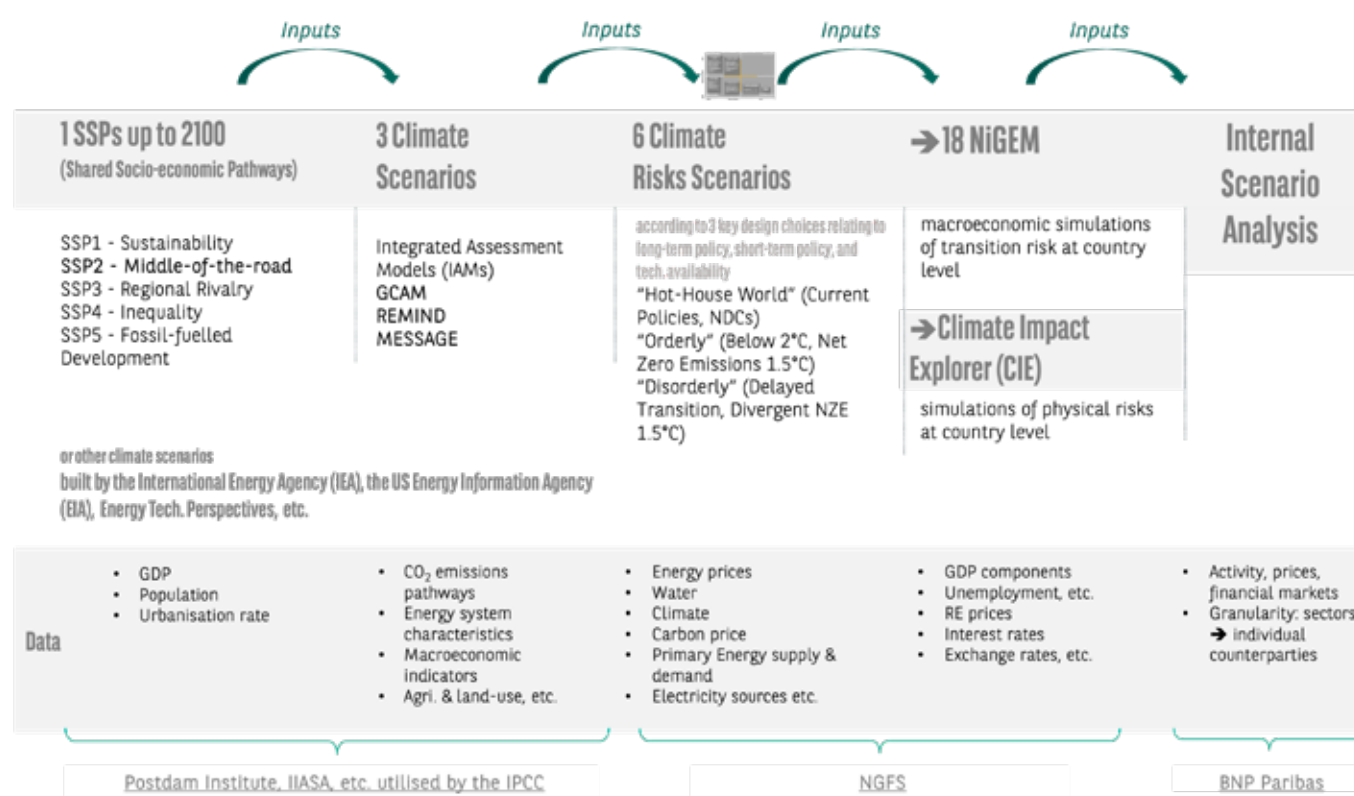


- “Hot House World” scenarios examine the risk of transitioning to a low-carbon economy, but contains the highest exposure to physical risk, due to the increase in extreme weather events and irreversible consequences. This category of scenarios includes “Current Policies” - climate policies that were in place before December 2020 - and “Nationally Determined Contributions” (NDCs).
- “Orderly” scenarios are the most effective in limiting global warming and therefore the most ambitious. The “Below 2 °C” scenario is based on the gradual intensification of climate policies, giving a 67% chance of limiting global warming to below 2 °C. The “Net Zero Emissions” 2050 scenario, which achieves carbon neutrality by 2050, is associated with global warming of 1.5 °C: physical risks are reduced to their minimum, but transition risks would be higher.
- Of the “Disorderly” scenarios, the “Delayed Transition” scenario follows the trajectory of the “Current Policies” scenario until 2030, before moving towards a greener and less polluting economy; the limitation of global warming at around 1.8 °C would require more stringent and stricter measures than those of the “Below 2 °C” scenario. The “Divergent Net Zero” scenario calls for net zero GHG emissions by 2050, but with higher costs due to divergent policies in different sectors and faster elimination of fossil fuels.

As described in **Figure 9**, these different scenarios serve as a basis for BNP Paribas' internal model. In particular, the results of the six NGFS scenarios are entered in the "NiGEM" econometric model used to calculate traditional macroeconomic variables (GDP, consumption, investment, interest rates, etc.) for a large number of countries. These macroeconomic variables can then be used for internal analysis of climate-related risk scenarios.

This analysis is an integral part of the Bank's risk management and financial steering system, in which climate-related risks are fully integrated: **the Group's internal capital adequacy assessment process (ICAAP) thus incorporates climate-induced risks for credit risk, operational risk, strategic risk and reputational risk.**

**Figure 9 | Integration of benchmark climate scenarios in the BNP Paribas methodology**



#### BNP PARIBAS TAKES CLIMATE-INDUCED RISKS INTO ACCOUNT IN THE GROUP'S INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

The analysis taken from the Risk ID process, from the overview of major risk drivers for the banking sector and the results of the stress test conducted using the NGFS "Delayed Transition" scenario serve as a basis for the Group's internal risk assessment and capital adequacy framework (ICAAP).

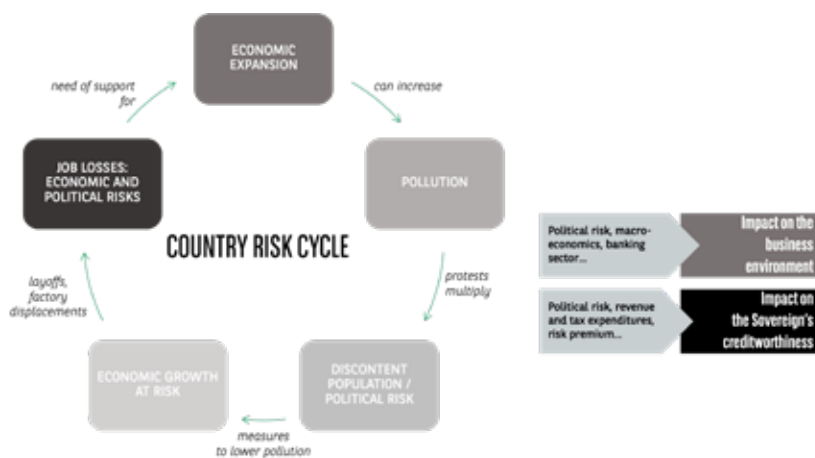
The risk assumed to occur after 2030 in the NGFS scenario is applied to the 2022-2024 period, similar to the short-term stress test introduced by the ECB in the 2022 climate stress test. While such a scenario is unlikely over this period, the stress test measures the portfolio's sensitivity to the implementation of very strong measures aimed at accelerating the transition (carbon tax leading to an emission cost of more than

€300/tCO<sub>2</sub>eq). Such a scenario generates a particularly strong economic shock in certain sectors (up to -30% for extraction industries) and shocks affecting the values of the least energy-efficient real estate assets. **The impact for the Bank is relatively moderate compared to global macroeconomic crisis scenarios, due to the Bank's highly diversified risk profile: concentrated mainly in sectors related to energy, transport, materials and cement. The stress test also includes impacts on market, operational and reputational risks, which are not material.**

### 3.1.3. THE COUNTRY RISK ASSESSMENT IS INFLUENCED BY CLIMATE-RELATED RISKS

In addition, BNP Paribas integrates climate change risks in the analysis of sovereign risks and country-risk in the broad sense. Country risk is an essential component in the assessment of the creditworthiness of the bank's counterparties involved in cross-border transactions; sovereign risks are central to the analysis of the risks associated with the bank's exposures to public and banking counterparties.

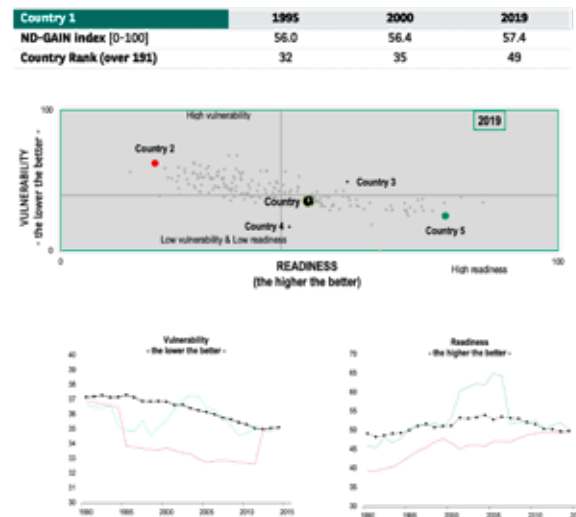
Figure 10 - Illustration of the country risk/sovereign risk cycle



For several years, climate risk analysis has been likely to cause the alteration - or enhancement as opportunities arise - of a country's business environment and sovereign credit rating. This expands on the usual sources of information reviewed during country budget committee meetings, at which the General Management, Business Lines and RISK define the Group's maximum exposures to given countries for the coming year.

In order to limit the risk of counting of "traditional" macroeconomic risks (inflation, debt, current account imbalances, socio-political instability, etc.) twice, the Group's approach is to present a physical and transition risk profile for each country. This approach relies on a series of external metrics, widely monitored by the financial community. One of the most significant metrics is the ND-Gain Climate Risk Index: based on World Bank and UN data, it compares each country's vulnerability to climate change and ability to adapt and transition to a low-carbon economy. The analysis is rounded out with other metrics from the Carbon Footprint Network, Climate Watch database and the EU on CO<sub>2</sub> emissions.

Figure 11 - Notre-Dame Global Adaptation Initiative (ND-GAIN) Index



The ND-Gain Index summarises a country's "current vulnerability to climate disruptions" (on par with "physical risk") and assesses its "readiness to attract private- and public-sector funding for adaptation measures" (on par with "transition risk").



# 3.2

## CLIMATE-RELATED RISK MANAGEMENT PROCESS AND INCORPORATION IN OVERALL RISK MANAGEMENT

*The integration of climate-related issues in BNP Paribas' risk management system dates back to 2011 and covers multiple processes. In 2021, the emphasis was placed on increasing the consideration of ESG issues in the credit process. The work in progress, part of a dedicated programme within the Group's new sustainable finance governance structure, aims to strengthen and expand this approach to include all traditional risk management processes, such as credit, operational and market risks.*

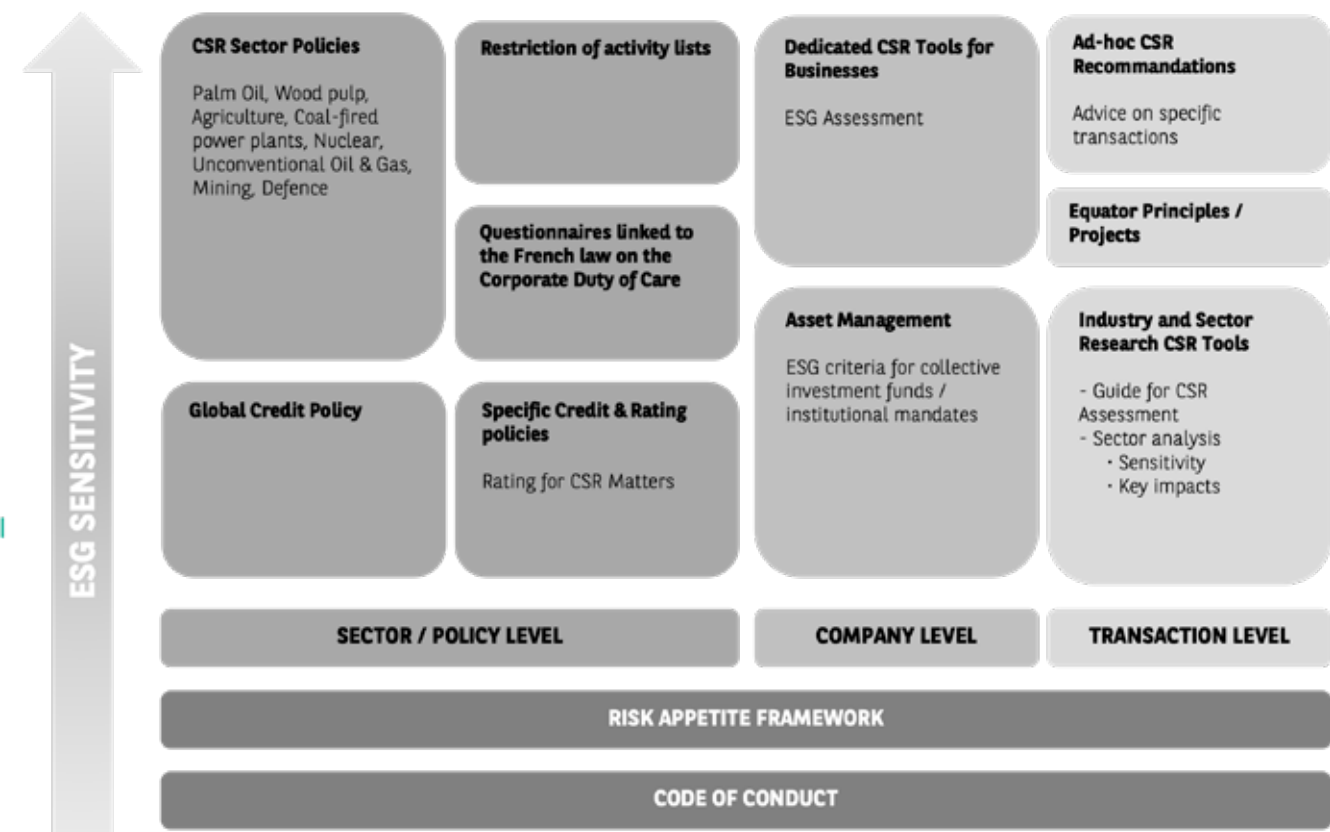
To manage climate-related risks:

- BNP Paribas has integrated climate-related issues in its risk management systems since 2011;
- BNP Paribas has stepped up the integration of climate-related and environmental issues in the credit process;
- BNP Paribas is continuing its plans to systematically integrate climate change in its operational risk management processes.

### BNP PARIBAS HAS INTEGRATED CLIMATE-RELATED ISSUES IN ITS RISK MANAGEMENT SYSTEMS SINCE 2012

Since 2011, BNP Paribas has gradually incorporated ESG issues, including climate-related issues, in its risk management systems (Figure 12):

Figure 12 - Group ESG risk management system

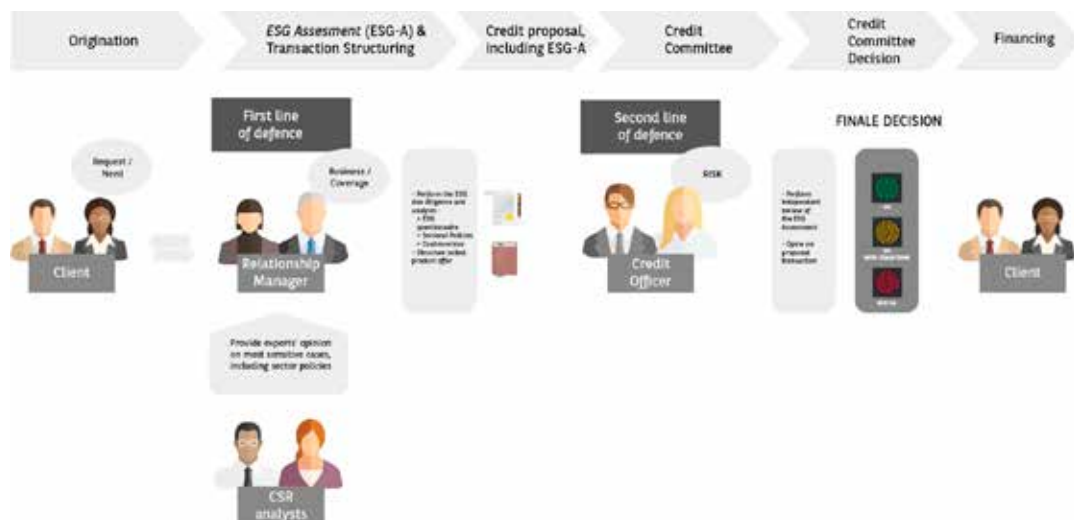


- **Environmental and climate-related risk drivers were incorporated in the Risk Appetite Framework**, BNP Paribas' global risk tolerance framework and two metrics related to the energy mix financed by BNP Paribas were integrated in the Risk Appetite Statement (RAS) metrics: the primary energy mix relating to the extraction of fossil fuels and the secondary mix relating to the distribution of financed electricity generation. The implementation of the NZBA commitment (Section 4) will gradually enhance the metrics monitored under the RAS.
- **Provisions relating to social and environmental responsibility (including climate) have been added in the General Credit Policy** and specific credit and rating policies, and are progressively reinforced;
- **Financing and investment policies<sup>28</sup>, classified as sector policies, have been established** in particular for sectors extensively associated with energy and climate (coal-based electricity generation, unconventional oil and gas, mining);
- **BNP Paribas observes the Equator Principles** in the conduct of major industrial and infrastructure projects, and for that purpose requires climate-related risk assessments for projects highly exposed to ESG risks;
- **ESG criteria, including some climate-related criteria, were incorporated** in the customer due diligence, new/modified activities and exceptional transactions processes.

### BNP PARIBAS HAS STEPPED UP THE INTEGRATION OF CLIMATE-RELATED AND ENVIRONMENTAL ISSUES IN THE CREDIT PROCESS

In 2021, BNP Paribas notably increased the consideration of ESG issues, including climate-related issues, in the credit process (Figure 13):

Figure 13 | ESG assessment in the customer experience and credit process



The new ESG assessment thus strengthens and documents due diligence on climate-related and environmental aspects both at counterparty and transaction level:

- **At the counterparty level**, an ESG questionnaire (ESG Assessment) was put in place. Tailored to each business sector, it includes targeted questions on climate (transition risk and physical risk), which are overweighed for sectors highly sensitive to climate-related issues. These questions are used to assess how well customers are prepared to manage all ESG issues, their compliance with BNP Paribas sector policies, and their strategies and commitments to address sector-specific ESG risks. They are supplemented by an analysis of the customer's environmental and potential climate-related controversies.

This analysis aims to identify companies whose weak ESG risk management performance could generate credit, investment or reputation risks,

as well as negative environmental and social impacts.

The approach is being gradually rolled out, starting with Large Corporate customers, coverage of which will be completed by end-2023. The system is currently being adapted for the smallest corporate customers and financial institutions, with the goal of being rolled out for the entire customer base (excluding retail customers) by end-2024.

- **At the transaction level**, the assessment mechanisms have been strengthened to allow for a verification of the suitability between the proposed banking facilities and counterparty's ESG profile, from origination to approval of the loan, to credit monitoring (operational controls) and reporting. Procedures and guidelines have been updated to remind Bank employees that the structuring of sustainability-linked transactions requires enhanced due diligence.

The results of this analysis is discussed by the Credit Committee and monitored over time (if risk mitigation measures need to be taken or for reporting purposes). Consequently, this analysis not only allows BNP Paribas to manage ESG risks (in line with its commitments, policies and duty of care) but also to support its customers in order to better manage these risks and identify new business opportunities.

**PLANS TO SYSTEMATICALLY INTEGRATE THE CLIMATE CHANGE IN OPERATIONAL RISK MANAGEMENT PROCESSES ARE ONGOING**

The integration of ESG issues in risk management systems is reinforced through various programmes.

The ESG Action Plan, launched in 2020, provided the Group with common standards and tools in 2021, such as the ESG ImpACT data platform, which made internal and

external ESG data available Groupwide.

The work linked to this Action Plan is now part of the “infrastructure” component of the new Sustainable Finance Infrastructure Committee (see 1.2). Therefore, the project specifically related to the integration of the ESG risk drivers, and climate in particular, in all key steps of traditional risk management processes, such as credit, operational and market risk is now part of the dedicated program “Methodologies, Analysis and Risk Management” (MARM).



# 3.3

## EXPLORATORY WORK TO BETTER UNDERSTAND PHYSICAL CLIMATE-RELATED RISKS

The assessment of the impacts of physical climate-related risks on BNP Paribas' activity is primarily explored on its financing activities. Whilst the 2020 BNP Paribas TCFD report tested a physical risk scoring approach on a corporate lending portfolio, the objective of this forthcoming 2021 report was **to test economic impacts of physical risk drivers** on a sample of lending exposures ranging from corporate loans to mortgages.

This analysis, conducted with the support from Baringa Partners, a leading consultancy in climate change and XDI, a specialist physical risk asset data provider, assessed the impacts of a wide range of climate risk factors: coastal, riverine and surface water floods, soil subsidence, extreme heat, freeze thaw, extreme wind and wild fire.

Climate projections were used to assess the damage (based on a projected annual cost of damage caused by physical climate risk drivers, expressed as % of the value of the asset) and business disruption (based on a projection of the annual interruption of activities expressed as a % of hourly volume), through the year 2100 in accordance with RCP 8.5 (business as usual/hot house world)

and RCP 2.6 (global warming limited to below 2 °C compared to pre-industrial levels):

- **For mortgage loans**, the model used projects the annual cost of damages caused by physical climate risk drivers for each year from 2021 to 2100 in each RCP scenario, then calculates the corresponding insurance premium. The annual change in the insurance premium is discounted from the value of the asset to reflect the potential loss of value year on year.

The test involved a sample of 25,000 individual properties in three countries (France, Belgium and the United States - some of the results of the test are presented below). This analysis, conducted at street level rather than at the exact house number, showed that **floods for the sample are the only risk drivers under review that can be considered high-risk** **Figure 14**.

Figure 14 | Main sources of material damages for the US sample

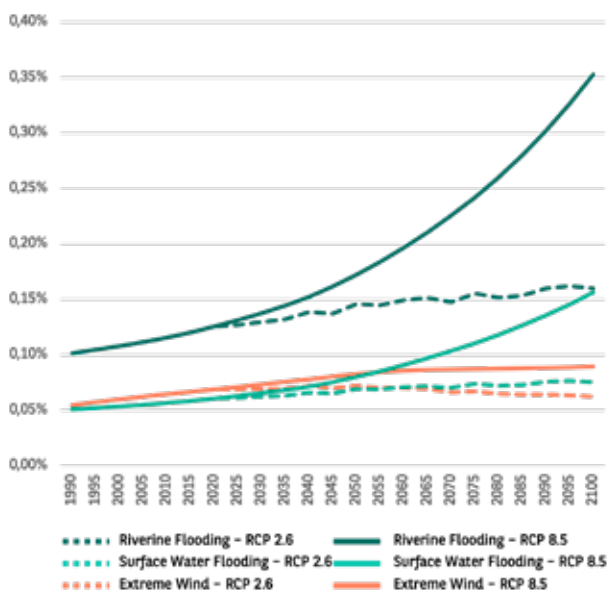


Figure 15 | Risk map for the US sample



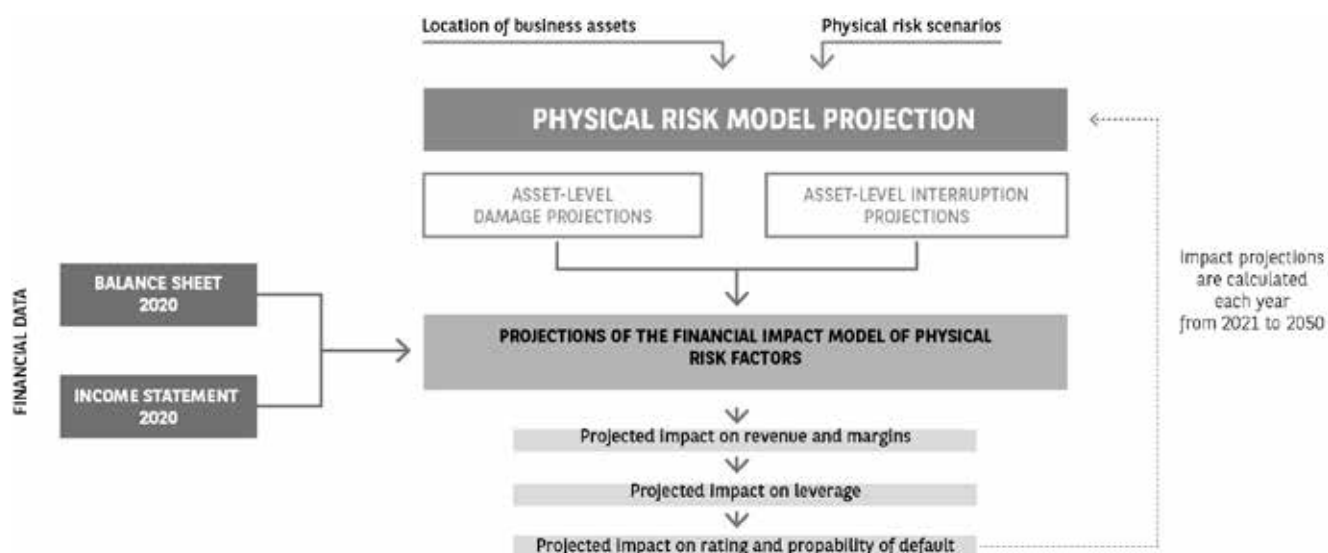
- High risk
- Medium risk
- Low risk

Size of the bubble corresponds to the property value.

- **For corporates**, the analysis focused on a broad spectrum of industrial companies and analyses nearly 1,000 counterparties from various sectors across 64 countries, representing more than €100 billion of lending exposure. The model estimates the annual impacts of company asset damage

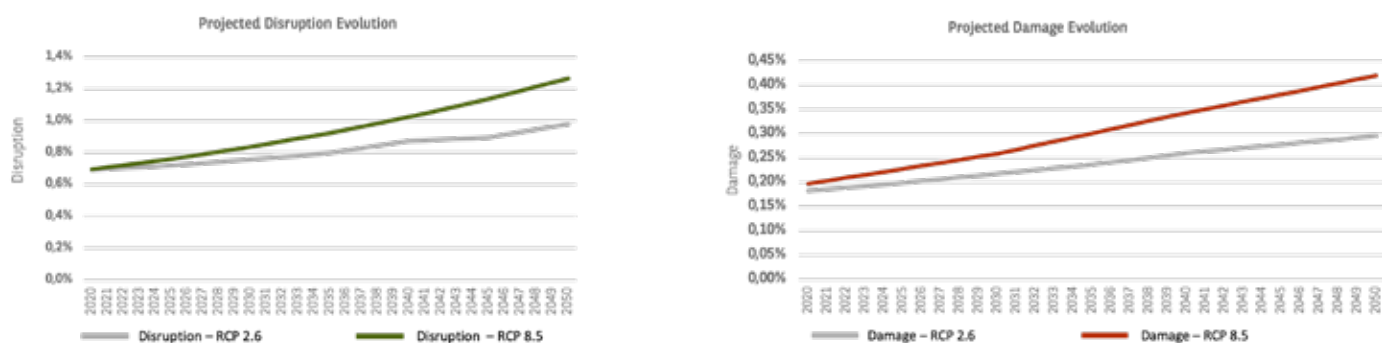
and disruption caused by physical climate risk on the company's economic health via its balance sheet and income statement (revenues and margins), leverage and finally probability of default:

Figure 16 | Illustration of the physical climate risk methodology applied to corporates



For example, the model applied to an industrial equipment manufacturer in the portfolio ("Company A") estimates, for different scenarios, the change over time in damage to its assets on average caused by climate change as well as business disruption:

Figure 17 | Change in business disruption and estimated damage for "Company A"



The data also provide information on major risks and projected financial impacts for "Company A":

Figure 18 | Distribution of risks for "Company A"

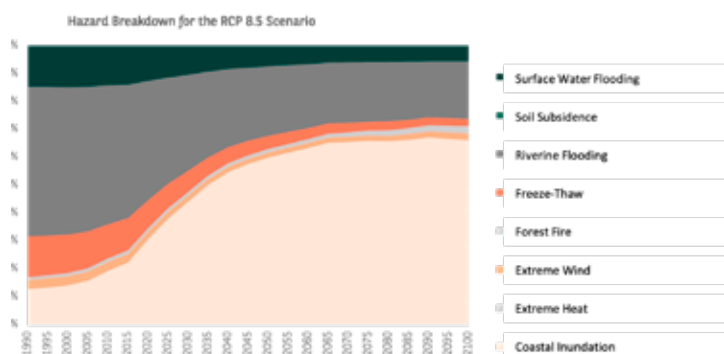
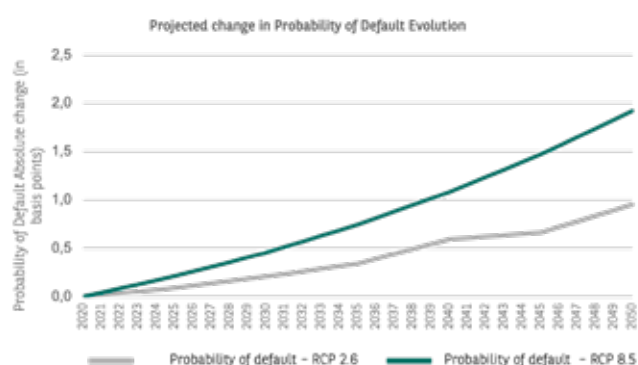


Figure 19 | Estimated impacts on probability of default for "Company A"

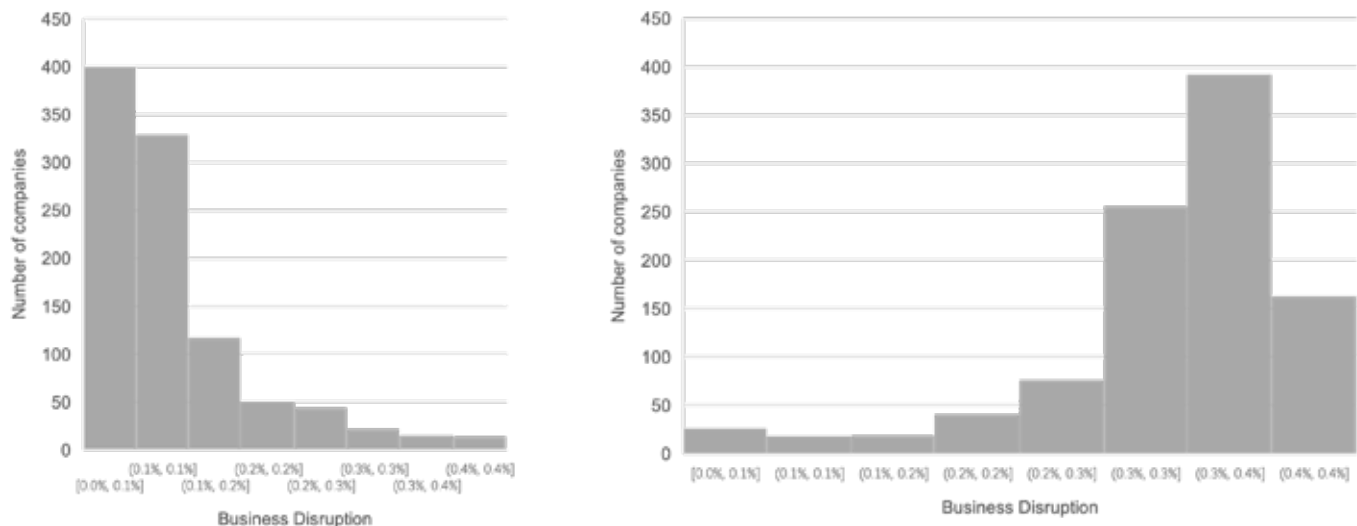




On the scale of the sample under review, the study serves to estimate the impact on the risk level of a given climate scenario compared to another: thus, compared to RCP Scenario 2.6, **RCP Scenario 8.5 quadruples the exposure to customers with a high average risk of physical damage** by the end of the cen-

tury. The assessment also identifies the most significant climatic risk drivers: **in this sample, the main sources of business disruption risk are heat waves, followed by floods, while the main source of damages is the risk of flooding.**

Figure 20 | Distribution of average business disruptions in the “Corporates” sample in 2020 (left) and 2100 (right) for RCP 8.5



The lessons learned from this analysis of the impact of physical risk on mortgage loans and companies inform the bank's own analysis and preparations, particularly when it comes to developing the internal stress testing system. In particular, the work done over the past two years will allow the Bank to prioritise key areas of focus in terms of climate-related risks and sectors. For example, heat, drought/water scarcity and flooding risks stand out as priority risks calling for improvements in measures to be made.

- There are many different approaches to physical climate risk modelling, and the industry has not yet converged towards a mature approach on this complex subject, requiring highly detailed analysis at the asset data level. Modelling long-term individual probabilities of default is a challenge, given the degree of long-term uncertainty about corporate financial statements and adjustment costs.

- To support further developments in this field, BNP Paribas has become a founding member of the Open Source Climate Initiative: OS-Climate<sup>29</sup> (see [section 2.2.6](#)). **BNP Paribas plays a leading role in OS-Climate, particularly in the development of physical risk measurement tools.** OS-Climate's ambition with respect to physical risk is to provide a common language on the use of climate models and their translation into risk measurement. The OS-Climate initiative aims to provide a platform where different models for physical risk drivers can be linked to vulnerability models that estimate the impact of risk events on each asset.

The lessons learned from the last two exploratory exercises on physical risk, as well as the developments carried out in partnership with OS-Climate, are gradually being incorporated in the internal stress-testing system, in order to strengthen the capacity to analyse physical risk scenarios.






# 4

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## METRICS AND TARGETS

USED TO ASSESS AND MANAGE  
CLIMATE-RELATED RISKS AND  
OPPORTUNITIES





**Incorporation of climate-related issues in the strategy, risk management and - in general, all activities of BNP Paribas relies on the definition and establishment of oversight metrics and targets. These metrics, chosen not only to measure the impacts of the Group's activity on climate change and the efforts it makes to reduce these impacts, but also to contribute to the energy transition, are evolving in line with its continuous improvement approach. The operational implementation of aligning the Group's lending activities is progressing. Consequently, the Group is able to report alignment results in three of the highest-greenhouse gas emitting sectors.**

# 4.1

## BNP PARIBAS HAS ESTABLISHED METRICS TO ASSESS, MONITOR AND OVERSEE CLIMATE-RELATED ISSUES

The range of metrics used by BNP Paribas to assess climate-related issues is growing every year. The expansion of sectors covered by our alignment strategy is based on new metrics, relating to the Oil & Gas and Automotive sectors in 2021. The work under way in 2022 will expand these alignment metrics to include other sectors and, for the first time, the Group will publish the Scope 3 emissions associated with its financing activities, in accordance with the PCAF methodology.

BNP Paribas develops metrics tailored to the variety of its business lines and its direct and indirect climate impacts:

- BNP Paribas measures the alignment of its loan book with carbon neutrality scenarios;
- BNP Paribas measures the climate footprint of its investment portfolios;
- BNP Paribas measures its support for the energy transition;
- BNP Paribas measures the greenhouse gas emissions associated with its activity.

Table 6 provides a summary of the main climate-related metrics used:

Table 6 | Group's main climate metrics

BUSINESS AFFECTED	TYPE	METRICS	METHODOLOGY	UNIT	STATIC	DYNAMIC	IMPLEMENTATION	CROSS-REFERENCE
FINANCING ACTIVITIES	CARBON FOOTPRINT	- carbon footprint of the loan book	PCAF	CO <sub>2</sub> eq	X		Publication at end-2022	Publication pending
		- intensity of financing-related emissions	PACTA	CO <sub>2</sub> eq per activity unit (kWh, km, MJ, etc.)	X	X	Gradual roll-out to highest-emission sectors: - since 2020: Electricity generation - 2022: Oil & Gas, Automotive	- TCFD section 4.1.2 - Climate Analytics and Alignment Report
	TECHNOLOGY MIX	- technological mix of financing activities		% of financing by technology (renewable capacity, electric vehicles, etc.)	X	X		
	SALES STRATEGY	- financing of renewable energy companies	/	€	X		Published since 2012	- TCFD section 2.2.2
		- sustainable finance tools (Green Bonds, SLL)	/	€	X		Published since 2015	- TCFD section 2.2.2
		- exposure by business sector	/	%			2022: publication of exposure to NZBA sectors covered	- TCFD section 4.1.1
INVESTMENT ACTIVITIES	CARBON FOOTPRINT	- carbon footprint of investment portfolios						- PAM: Sustainability Report - Cardif: report on Article 29 of the French Energy-Climate Law
		- intensity of investment-related emissions						
OPERATIONS	CARBON FOOTPRINT	- carbon footprint of operations	Internal	CO <sub>2</sub> eq and CO <sub>2</sub> eq/FTE	X			- TCFD section 4.1.4



## 4.1.1. BNP PARIBAS MEASURES THE ALIGNMENT OF ITS LOAN BOOK WITH CARBON NEUTRALITY SCENARIOS

### BNP PARIBAS APPLIES THE PACTA METHODOLOGY FOR MEASURING THE ALIGNMENT OF ITS LOAN BOOK WITH THE GOALS OF THE PARIS AGREEMENT

Since 2018, the Group has agreed, in conjunction with four other international banks, to use the PACTA methodology<sup>30</sup> and to measure the alignment of its loan book with the goals of the Paris Agreement, starting with carbon intensive sectors.

The chosen methodology, adapted for each sector, follows the recommendations of the NZBA (Table 7). Developed in order to be both transparent and comparable, it will evolve over time as progress is made, in collaboration with other players in the banking sector.



Table 7 | NZBA Methodology Approach

	NZBA GUIDELINES	BNP'S COMMITMENT TO NET ZERO
<b>TARGET SCOPE</b>	<ul style="list-style-type: none"> <li>- Targets shall cover lending activities</li> <li>- Signatories should prioritise sectors based on GHG emissions, GHG intensities and/or financial exposure in their portfolio in their first round of target setting</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>2025 targets cover financings directly provided and committed and will expand to capital market activities in future reports</b></li> <li>✓ Three sectors reviewed, prioritising the most GHG emitting sectors in the first round of target setting</li> </ul>
<b>METRICS</b>	Targets shall be set based on: <ul style="list-style-type: none"> <li>- Absolute emissions; and/or</li> <li>- Sector-specific emissions intensity</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Intensity based targets</b> (e.g., gCO<sub>2</sub>/metric) set for all 3 sectors.</li> <li>✓ <b>Operational KPIs based on technology mix or financing exposure</b></li> </ul>
<b>BASELINE</b>	<ul style="list-style-type: none"> <li>- Base year for targets shall be no more than 2 full reporting years prior to the year when the target is set</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>2020 baseline set</b>, with an annual alignment report of our portfolio to be disclosed</li> </ul>
<b>BENCHMARK SCENARIO</b>	<ul style="list-style-type: none"> <li>- The scenarios used by banks shall come from credible and well-recognised sources and banks should provide rationale for the scenario(s) chosen</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>IEA Net Zero scenarios</b></li> </ul>
<b>HORIZON</b>	<ul style="list-style-type: none"> <li>- Intermediate targets shall include a target for 2030 or sooner</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>2025 targets</b> set for all three sectors based on our portfolio projections for 2025 and trajectory to a net-zero economy by 2050</li> </ul>
<b>EMISSIONS DATA</b>	<ul style="list-style-type: none"> <li>- To calculate emission profiles, Banks to explain allocation approach used, data sources credibility and limitations</li> </ul>	<ul style="list-style-type: none"> <li>✓ <b>Transparent and detailed methodology</b> provided based on the expertise of our Climate Analytics &amp; Alignment team</li> </ul>

In 2022, BNPP Paribas published its first alignment report covering three of the highest-emission sectors: power generation, oil and gas, and automotive<sup>31</sup>. Although power, oil and gas and automotive represent only 7% of the Bank's loan book, the energy sector accounts for more than 75% of global greenhouse gas (GHG) emissions<sup>32</sup>.



<sup>30</sup> | Paris Agreement Capital Transition Assessment

<sup>31</sup> | Climate Analytics and Alignment Report, May 2022

<sup>32</sup> | Source : World Resources Institute : 5 Facts about Country & Sector GHG Emissions (wri.org)

### BNP PARIBAS MEASURES THE ALIGNMENT OF ITS POWER GENERATION LOAN BOOK

By applying the PACTA<sup>33</sup> methodology to the portfolio of loans issued to corporates in the power sector, the Bank was able to calculate two alignment measurement metrics. These calculations offer a view of the portfolio at end-2021 and a projection for 2025.

In line with its commitment to align its activities with a zero net trajectory by 2050, BNP Paribas chose to use the International Energy Agency's Net Zero scenario (IEA NZE) as a benchmark. The choice of this scenario, which is very similar to the IEA's Sustainable Development Scenario (SDS) used up to that point, allows the Group to compare its loan book trajectory with the goal of a net zero world by 2050.

The projection incorporates:

- The strategy adopted by customers to change their electricity generation sources;
- the impact of the Group's commitment to no longer fund companies using coal to generate electricity by 2030 in the European Union and OECD countries, and by 2040 in the rest of the world.

### BNP PARIBAS MEASURES THE ALIGNMENT OF ITS OIL AND GAS LOAN BOOK

The measurement of the alignment of the BNP Paribas Oil and Gas loan book covers Scope 1 and 2 emissions (emissions related to customer operations), as well as Scope 3 emissions (emissions related to the end use of oil and gas products). Oil and Gas activities included in the calculation are exploration and production (upstream activities) and oil refining. With the end use of oil and gas products, these activities are responsible for more than 90% of the oil and gas emissions life cycle.

The greenhouse gases taken into account for the oil and gas sector include carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), which accounts for a significant share of the sector's operational emissions.

The portfolio's performance is measured by the intensity of GHG emissions per unit of energy produced, expressed in grams of CO<sub>2</sub> equivalent per megajoule (gCO<sub>2</sub>e/MJ), and is compared to the IEA's NZE 2050 scenario, adjusted for Scopes 1 and 2.

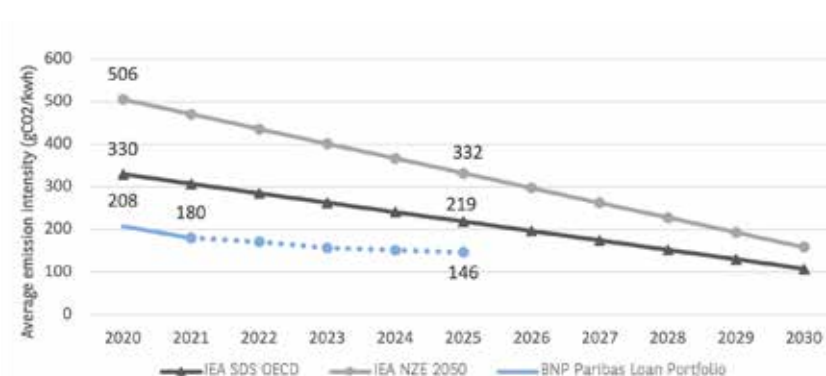
Based on the approach described above and thanks to BNP Paribas' longstanding proactive management of its support for the industry through specific policies and the selection

- The electricity mix is calculated in terms of production capacity. It is very representative of the Group's customer base, as 98% of outstanding loans to electricity producers were included in the calculation. According to the electricity mix, the loan book is less carbon-intensive and more geared towards renewable energies both in 2021 and 2025 when compared to the NZE 2050 scenario (and thus to the SDS scenario). The percentage of renewable energies in the

BNP Paribas portfolio, including hydroelectricity, was 62% in 2021, and projected at 66% in 2025, compared with an NZE 2050 target of 56% in 2025.

The intensity of the portfolio's direct CO<sub>2</sub> emissions, presented in Figure 21, is below the global average and is in line with the IEA's NZE 2050 scenario and OECD SDS 2050 scenario.

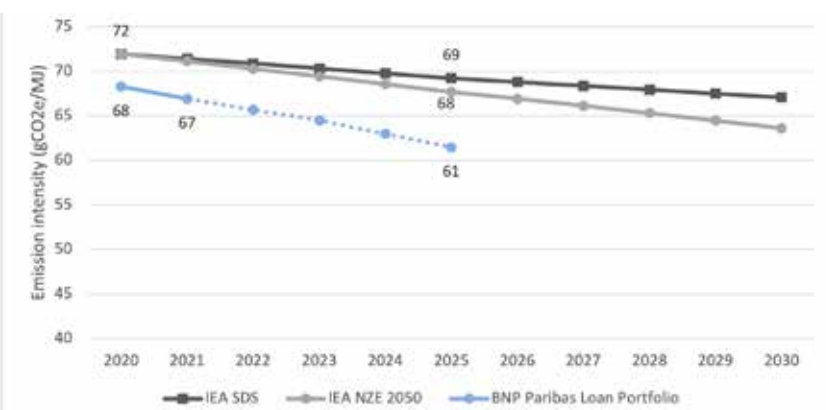
Figure 21 | Projected change in CO<sub>2</sub> intensity of the BNP Paribas electricity generation loan book compared to the IEA's OECD 2050 scenario and NZE 2050 scenario<sup>34</sup>.



of customers, with ambitious transition plans and reduction targets, BNP Paribas portfolio stood at 68 gCO<sub>2</sub>e/MJ at 31/12/2020, i.e. outperforming the 72 gCO<sub>2</sub>e/MJ in the benchmark IEA NZE scenario. The projected change in the intensity of BNP Paribas loan book emissions, presented in Figure 22, shows a

greater reduction than under the IEA's NZE and SDS scenarios.

Figure 22 | Projected change in CO<sub>2</sub> intensity of the BNP Paribas Oil & Gas loan book (upstream and refining) compared to the IEA's OECD 2050 scenario and NZE 2050 scenario<sup>34</sup>.





### BNP PARIBAS MEASURES THE ALIGNMENT OF ITS AUTOMOTIVE SECTOR LOAN BOOK

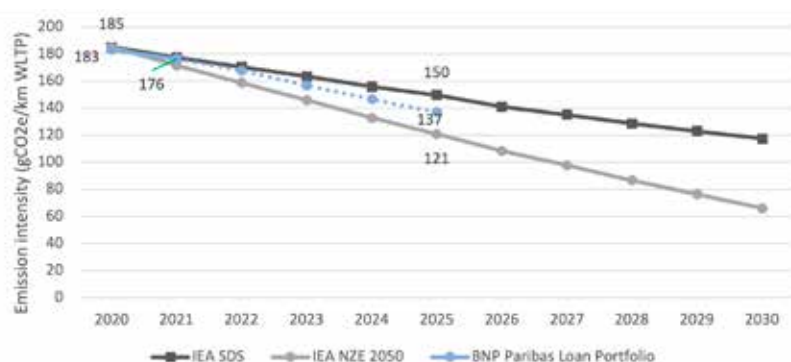
The measurement of the automotive loan book's alignment is based on Scope 3 CO<sub>2</sub> emissions from the production of light-duty vehicles by manufacturers.

The performance of the BNP Paribas portfolio is assessed using (i) an engine mix metric measuring the share of each technology in the financed vehicle portfolio, and (ii) a measurement of the intensity of CO<sub>2</sub> emissions, expressed in gCO<sub>2</sub>/km over a standardised driving cycle (WLTP<sup>35</sup>).

The two metrics are compared to the IEA's three main scenarios for the automotive sector<sup>36</sup>.

The results show a benchmark emission intensity for the automotive portfolio of 183 g CO<sub>2</sub>/km (WLTP) in 2020, which is already aligned with the assessment of the global IEA benchmark of 185 g CO<sub>2</sub>/km (WLTP). Presented in **Figure 23** the projection of this intensity by 2030 shows a greater decrease compared to the SDS scenario, thus meeting the goal of the Paris Agreement.

Figure 23 | Projected change in CO<sub>2</sub> intensity of the BNP Paribas automotive sector loan book, compared to the IEA's OECD 2050 scenario and NZE 2050 scenario<sup>34</sup>.



### BNP PARIBAS MEASURES CARBON INTENSITY IN THE SHIPPING SECTOR

In 2021, BNP Paribas participated in the update of the measurement of the shipping sector loan book's carbon intensity, in accordance with the Poseidon Principles<sup>37</sup>. The objective of the Principles is to meet the goal set by the International Maritime Organization (IMO) to reduce shipping GHG emission by at least 50% by 2050 (compared to 2008 levels). At 31 December 2020, the alignment score for the BNP Paribas loan book in terms of carbon intensity was 7.5% above the alignment score (vs. 2.88% at 31 December 2019). This adverse change can be attributed to a methodology adjustment in connection with the fourth IMO study on greenhouse gas emissions, and to the exceptional impact of the Covid-19 crisis. BNP Paribas remains committed to analysing and managing the CO<sub>2</sub> intensities of its shipping finance portfolios using this shared methodology.



<sup>35</sup> | Worldwide harmonized Light vehicles Test Procedures

<sup>36</sup> | The IEA scenarios only refer to the market share of low-carbon technologies, while we also use IHS Markit and Asset Resolution data to establish emission intensity targets for each scenario

<sup>37</sup> | www.poseidonprinciples.org

## 4.1.2 BNP PARIBAS MEASURES THE CARBON FOOTPRINT OF ITS INVESTMENT PORTFOLIOS

### BNP PARIBAS CARDIF APPLIES VARIOUS CLIMATE-RELATED METRICS TO ITS INVESTMENT PORTFOLIOS

BNP Paribas Cardif also publishes multiple reporting metrics on its investment portfolio, listed in [Table 8](#). They are presented and developed in greater detail in the report on Article 29 of the French Energy Climate law<sup>38</sup>.

Table 8 | Main climate-related reporting metrics applied to BNP Paribas Cardif investments

ASSET CLASS	METRIC	GOAL
<b>CORPORATE EQUITIES AND BONDS</b>	Carbon intensity in tCO <sub>2</sub> eq/€m of EV (enterprise value)	Quantify the impacts of investments on global warming
	Portfolio temperature, in °C	Determine the alignment of portfolios to a global warming level
<b>GOVERNMENT BONDS</b>	Carbon intensity, in tCO <sub>2</sub> eq/€m GDP	Quantify the impact of investments on global warming
	Percentage of each energy source in the country energy mix	Identify and monitor the alignment of the energy mix of investments in government bond with the energy mix leading to the 2 °C pathway (IEA, 2025/2050)
<b>EQUITIES AND BONDS ISSUED BY POWER GENERATION COMPANIES</b>	Percentage of each energy source in electricity generation	Identify and monitor the alignment of the energy mix of investments in utilities with the energy mix leading to the 2 °C pathway (IEA, 2030)
<b>GREEN BONDS</b>	Avoided emissions, in tCO <sub>2</sub> eq/€m invested	Comparison of GHG emissions associated to the project linked to the bond to a reference scenario

### BNP PARIBAS ASSET MANAGEMENT CALCULATES THE CARBON FOOTPRINT OF ITS INVESTMENT PORTFOLIOS

BNP Paribas Asset Management measures and publishes the carbon footprint of its portfolios, an estimate of GHG emissions financed. The approach is based on the carbon footprint of each company in the portfolio, with the carbon footprint of the portfolio as a whole being the weighted average of the carbon footprints of each company in which it is invested. The carbon footprint of the

fund is thus the percentage of company emissions that can be attributed to the fund, given the percentage held in each company. These statistics appear in the monthly fund reports and are compared to the emissions of the benchmark indices<sup>39</sup>.

At this point only direct and indirect emissions (Scopes 1 and 2) of portfolio companies are included.

## 4.1.3. BNP PARIBAS MEASURES ITS SUPPORT FOR THE ENERGY TRANSITION

In its various business lines, BNP Paribas measures the deployment of products and services offered to help its customers achieve their own energy and ecological transition.

- The amount of funding allocated to the renewable energy sector was €18.6 billion, outperforming the €18 billion target set for end-2021;
- BNP Paribas underwrote Sustainability Linked Loans (SLLs) setting GHG emissions reduction as one of their criteria totalling €12.5 billion<sup>40</sup>

The Group also monitors broader metrics that include climate-related issues. In 2021:

- BNP Paribas was the world's No. 2 global player on the green bond market according to Dealogic (and No. 1 in EMEA), with €22 billion as a bookrunner for its customers;
- Financing granted to companies for the energy transition and sectors considered directly contributing to the UN Sustainable Development Goals<sup>41</sup> amounted to €244 billion.

38 | Available at <https://www.bnpparibascardif.com/en/corporate-social-responsibility>

39 | For more information, go to <https://www.bnpparibas-am.com/en/sustainability/>

40 | BNP Paribas' share of syndicated loans

41 | Metric including loans and bond issues related to companies in sectors considered as directly contributing to the SDGs, as well as investment solutions contributing to the achievement of the SDGs



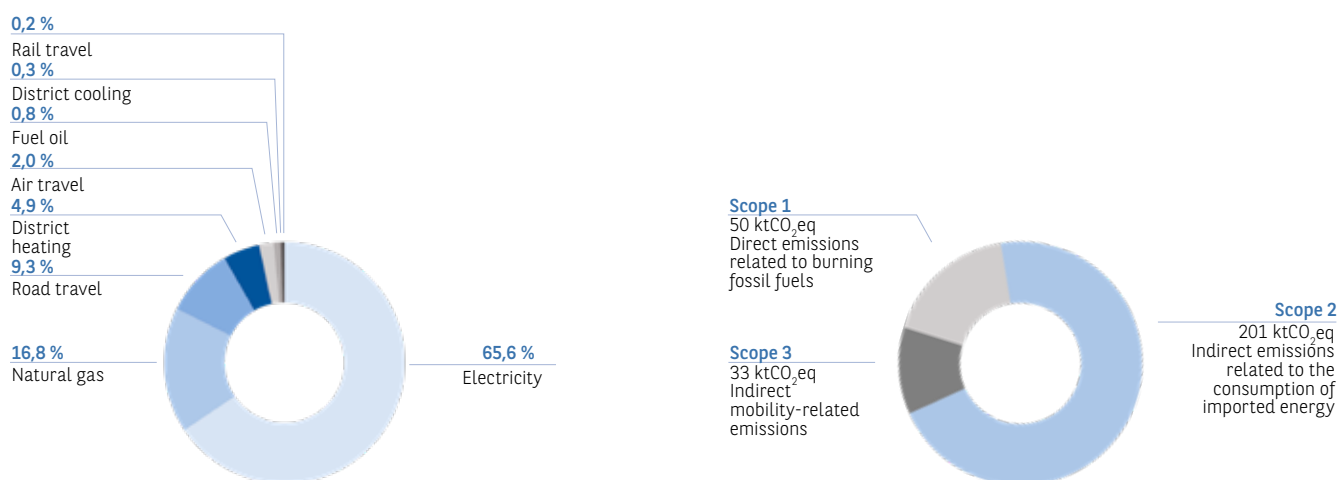
## 4.1.4 BNP PARIBAS MEASURES GREENHOUSE GAS EMISSIONS ASSOCIATED WITH ITS ACTIVITY

### BNP PARIBAS HAS MEASURED ITS OPERATIONAL EMISSIONS SINCE 2012

Each year, the BNP Paribas Group measures and publishes its operational GHG emissions, by converting the energy used in its buildings and in business travel into metric tons of CO<sub>2</sub> equivalent (tCO<sub>2</sub>eq, including the six GHG defined in the

Kyoto Protocol). The Group's total emissions stood at 284 ktCO<sub>2</sub>eq in 2021, which can be broken down as follows (Figure 24).

Figure 24 | Distribution of BNP Paribas operational GHG emissions, by type and by scope



Divided by the Group's total headcount, operational GHG emissions came out at 1.5 tCO<sub>2</sub>/FTE, down 19% versus 2020 and 53% versus 2012 (Table 9).

A significant portion of the decrease observed since 2020 can be attributed to the Covid-19 pandemic, as fewer employees worked at the Group's offices and business travel was significantly limited. This decline should be considered from that perspective, adding in emissions stemming from the increase in energy consumption at home associated with telework. The Group wanted to assess emissions based on averages supplied by recognised external sources, and thus estimated them at approximately 26 ktCO<sub>2</sub>eq overall.

These calculations thus include all of the Group's direct emissions (Scope 1) and indirect emissions related to energy purchases (Scope 2), as well as indirect emissions associated with business travel (i.e. Scope 3.6 within the meaning of the GHG Protocol)

### BNP PARIBAS CALCULATES EMISSIONS RELATED TO ITS FINANCING ACTIVITIES (SCOPE 3)

Mindful of the fact that most emissions related to its activities are associated to indirect emissions related to its financing activities, BNP Paribas has kept close track of methodology developments in the sector for the last several years.

In 2022, the Group joined the Partnership for Carbon Accounting Financials (PCAF) and undertook to publish its financed emissions at end-2022 using this methodology.

Table 9 | Change in BNP Paribas direct GHG emissions since 2012

	2012	2018	2019	2020	2021	2025 TARGET
GHG EMISSIONS (tCO <sub>2</sub> eq/FTE)	3.21	2.45	2.32	1.85	1.50	<1.85

# 4.2

## BNP PARIBAS HAS SET QUANTITATIVE TARGETS FOR THE PURPOSE OF MANAGING CLIMATE-RELATED RISKS AND OPPORTUNITIES

*The commitments made by BNP Paribas and its entities by joining the Net Zero Alliances include the determination and publication of interim quantitative targets by 2030 at the latest. BNP Paribas has decided to set targets for 2025, in line with the period of its strategic plan, and is gradually specifying targets one business sector at a time, starting with the highest emission sectors.*

BNP Paribas' initiatives in response to climate-related issues are centred on two categories of objectives:

- BNP Paribas is committed to aligning its activities with a carbon neutrality trajectory;
- BNP Paribas has included climate-related targets in its 2022-2025 strategic plan.

### 4.2.1. BNP PARIBAS IS COMMITTED TO ALIGNING ITS ACTIVITIES WITH A CARBON NEUTRALITY TRAJECTORY

#### BNP PARIBAS IS DEPLOYING ITS NZBA COMMITMENT VIA INTERMEDIATE TARGETS IN THREE OF THE HIGHEST-EMISSION SECTORS

By joining the NZBA, BNP Paribas committed to aligning the greenhouse gas emissions generated by its lending and investment for own account activities with the pathway required to achieve carbon neutrality by 2050.

In 2022, BNP Paribas completed a major first step by publishing its first alignment report<sup>41</sup> and setting interim targets for three of the highest-emission sectors: power generation, oil & gas and automotive.

These targets, presented in this report and summarised in Table 10, are ambitious in two ways:

- set for 2025, they are particularly close in time;
- they are more ambitious than the NZE 2050 scenario for energy, and the SDS scenario for the automotive sector<sup>42</sup>.

Table 10 | BNP Paribas loan book alignment targets

SECTOR	METRIC		UNIT	2020	2025 TARGET	NZE 2050	SDS
POWER GENERATION	Financed electricity mix, in capacity	Share of Renewable energy (including hydropower)	%	57	> 66	56	55*
		Share of coal	%	10	< 5	18	10*
	Emission intensity (Scope 1)		gCO <sub>2</sub> /kWh	208	< 146	332	219*
OIL & GAS (UPSTREAM AND REFINING)	Credit exposure to upstream production activities	oil		-25% between 2020 and 2025		NA	
		oil and gas		-12% between 2020 and 2025			
	Emission intensity (Scopes 1, 2 and 3)		gCO <sub>2</sub> e/MJ	68	< 61	68	
AUTOMOTIVE (CAR MANUFACTURERS)	Share of electrified vehicles (BEV+PHEV+FC) <sup>43</sup> in the portfolio train		%	4	> 25	34	19
	Emission intensity (Scopes 3)		gCO <sub>2</sub> /km (WLTP)	183	< 137	121	150

\* extrapolation of OECD SDS scenario

### BNP PARIBAS CARDIF AND BNP PARIBAS ASSET MANAGEMENT UNDERTAKE TO SUPPORT THE ZERO CARBON TARGET BY 2050

By joining the Net Zero Asset Owner Alliance (NZAOA) in September 2021, BNP Paribas Cardif undertook to transition its investment portfolios toward carbon neutrality by 2050, regularly publishing its progress and setting interim targets every five years.

Under the Net Zero Asset Manager initiative (NZAMi) joined in November 2021, BNP Paribas Asset Management undertook to work in partnership with its asset owner customers on decarbonisation targets consistent with the ambition to achieve carbon neutrality by 2050, to set an intermediate target in terms of the percentage of assets under management in line with this ambition, and to review this target every five years with a view to increasing it until 100% of assets are covered.

The first intermediate objectives of these approaches will be made public in the coming months.



### 4.2.2. BNP PARIBAS HAS INCLUDED CLIMATE-RELATED TARGETS IN ITS 2022-2025 STRATEGIC PLAN

Under its 2022-2025 Strategic Plan, BNP Paribas has defined new CSR management metrics, with commitments set for 2025. Two are associated with the climate transition:

- **Reach €200 billion in support enabling our clients to transition to a low-carbon economy<sup>44</sup>;**
- **Maintain operational greenhouse gas emissions below 1.85 tCO<sub>2</sub>eq/FTE** (direct emissions, indirect emissions from energy purchases and business travel).

The Group has also set broader targets, encompassing the energy transition, undertaking to achieve by committing to achieve by 2025:

- **€150 billion in sustainable loans<sup>45</sup>;**
- **€200 billion in sustainable bonds<sup>46</sup>;**
- **€300 billion in sustainable investments** (assets under management of Article 8 and 9 SFDR funds)<sup>47</sup>.

44 | Green loans, green bonds and financing for low-carbon technologies, such as renewable energy, green hydrogen, etc.

45 | Cumulative amount of sustainable loans for 2022-2025 related to environmental and social issues, originated by BNP Paribas and granted to its customers.

46 | Cumulative amount of all types of sustainable bonds 2022-2025 (total amount divided by the number of bookrunners).

47 | BNP Paribas Asset Management open funds distributed in Europe; to be noted that IPS will progressively adapt the KPI with more "sustainable" assets under management (taking into account ESG principles).





# CONCLUSION

**For the third year in a row, BNP Paribas has issued a dedicated report on its efforts to combat climate change and its management of the associated risks and opportunities.** The 2021 report should be read in connection with a new report, named Climate Analytics and Alignment Report, which details the assumptions, metrics and targets chosen to ensure the alignment of our loan books with recognised carbon neutrality trajectories by 2050 for the highest-emission sectors; this first alignment report addresses three of these sectors: power generation, oil and gas, automotive.

These two publications will be supplemented with others, including the dedicated reports of our asset management subsidiaries, BNP Paribas Asset Management and BNP Paribas Cardif. At the end of the year, we will disclose emissions related to our financing activities (Scope 3), in accordance with the PCAF methodology.

These reports shed light, from different angles, on the approach of climate issues by a diversified global banking group, subject to different regulations, and highlight how climate change affects the group in a variety of ways, both direct and indirect, depending on its activities. They also meet the various commitments made within the Group, such as those related to the Net Zero alliances, which are associated with the imperative of regularly communicating on progress made and action plans under way.

2021 is important to BNP Paribas' climate strategy, as it joined the UNEP-FI Net Zero Alliances, organised its governance, expanded its teams in all business lines, and prepared targets and a 2022-2025 strategic plan with climate as one of its main pillars. The coming months and years will see this strategy rolled out and ramped up, which will be reflected in upcoming reports, including the publication of

our Scope 3 financed emissions and alignment reports, which will be expanded each year to our new business sectors.

**“The climate is vital for the future of humanity, for the future of BNP Paribas and the future of our customers.”** This conviction, driven by Jean-Laurent Bonnafé, Chief Executive Officer of the Group, is gradually permeating all of the Group's activities. In this report, BNP Paribas strives to share its progress, with the intent of contributing with humility and determination to the critical collective effort of guiding economies towards carbon neutrality by 2050.



# GLOSSARY

2DS: 2 Degree Scenario

ACPR: *Autorité de contrôle prudentiel et de résolution* (French prudential supervisory and resolution authority)

AM: Asset Management

AMF: *Autorité des marchés financiers* (French Financial Markets Authority)

BCEF: *Banque Commerciale en France* (Commercial Banking in France)

BNL: Banca Nazionale del Lavoro

BREAM: Building Research Establishment (BRE) Environmental Assessment Model

CAC: *Commissaire aux comptes* (Statutory Auditor)

CCCA: Collective Commitment to Climate Action

CCIRC: *Comité de contrôle interne, des risques et de la conformité* (Internal Control, Risk and Compliance Committee)

CDP: Carbon Disclosure Project

CEO: Chief Executive Officer

CFRF: Climate Financial Risk Forum

CGEN: *Comité de gouvernance, d'éthique, des Nominations et de la RSE* (Governance, Ethics, Nominations and CSR Committee)

CIB: Corporate and Institutional Banking

CISL: Cambridge Institute for Sustainability Leadership

CoE: Center of Expertise

COP: Conference of Parties

CPBS: Commercial, Personal Banking & Services

CPBF: Commercial & Personal Banking in France

CSA: Corporate Sustainability Assessment

CSR: Corporate Social Responsibility

EBA: European Banking Authority

ECB: European Central Bank

EIS: *Études industrielles et sectorielles* (Industry and Sector Research)

EMEA: Europe, Middle East, Africa

EpE: *Entreprises pour l'environnement*

ESG: Environmental, social and governance (criteria)

ETF: Exchange Traded Fund

EU: European Union

EV: Enterprise value

FBF: *Fédération bancaire française* (French Banking Federation)

FCA: Financial Conduct Authority

FRB: French Retail Banking

FTE: Full-time equivalent

GHG: Greenhouse gases

GM: General Meeting

GRESB: Global Real Estate Sustainability Benchmark

HQE: *Haute qualité environnementale* (high environmental quality)

ICAAP: Internal Capital Adequacy Assessment Process

IDDR: *Institut du développement durable et des relations internationales* (Institute for Sustainable Development and International Relations)

IEA: International Energy Agency

IASA: International Institute for Applied Systems Analysis

IMO: International Maritime Organization

INRA: *Institut national de la recherche agronomique* (French Institute for Agronomic Research)

IPCC: Intergovernmental Panel on Climate Change

IPS: Investment & Protection Services

ISE: Intermediate-Sized Enterprise

ISO: International Standard Organization

KYC: Know Your Customer

LEED: Leadership in Energy and Environmental Design

LT: Long term

MRH: Multi-risk home insurance

MT: Medium term

NDCs: Nationally Determined Contributions

ND-Gain: Notre-Dame Global Adaptation Initiative

NEST: Network of Experts in Sustainability Transitions

NFPR: Non-financial performance report

NGFS: Network for Greening the Financial System

NGO: Non-Governmental Organisation

NZBA: Net Zero Banking Alliance

OECD: Organisation for Economic Cooperation and Development

OTI: *Organisme tiers indépendant* (Independent third-party organisation)

PAB: Paris Aligned Benchmark

PACTA: Paris Agreement Capital Transition Assessment

PCAF: Partnership for Carbon Accounting Financials

PF: Personal Finance

PRA: Prudential Regulation Authority

RAS: Risk Appetite Statement

RCP: Representative Concentration Pathway

REIM: (BNP Paribas) Real Estate Investment Management

SGDs: (United Nations) Sustainable Development

Goals

SRI: Socially Responsible Investment

SSM: Single Supervisory Mechanism

UCI: Undertaking for collective investment

UN: United Nations

SB2A: Science-Based 2 °C Alignment

SBCC: Sustainable Business Competence Center

SBTi: Science Based Target initiative

SDS: Sustainable Development Scenario (developed by the IEA)

SEC: Securities and Exchange Commission

SLL: Sustainability-Linked Loan

SME: Small and Medium-Sized Enterprises

SMI: Sustainable Markets Initiative

SSP: Shared Socioeconomic Pathways

ST: Short term

STEP: Stress Testing and Extended Planning

STFS: Stress Testing & performance Synthesis

TCFD: Task force on Climate related Financial Disclosures

TEG: Technical Expert Group (on Sustainable Finance)

UCITS: Undertakings for Collective Investment in Transferable Securities Directives

UNEP FI: United Nations Environment Programme Finance Initiative

URD: Universal Registration Document

WBCSD: World Business Council for Sustainable Development

WLTP: Worldwide harmonized Light Vehicle Test Procedure

WM: Wealth Management

ZEN2050: (Study) "*Zéro émissions nettes*" (Zero net emissions) by 2050







# PHOTOS

## Groupe BNP Paribas

BNP Paribas Group Communication internal studio  
(p 29)

## Les Echos

p 7

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# TABLE OF CONTENT

INTRODUCTION.....	2
EXECUTIVE SUMMARY.....	3
<b>1. GOVERNANCE OF CLIMATE-RELATED ISSUES.....</b>	<b>4</b>
1.1. The board of directors supervises the management of climate-related issues.....	6
1.2. Management proposes and implements the Group's climate strategy .....	9
<b>2. STRATEGY - INTEGRATING CLIMATE-RELATED ISSUES IN THE GROUP'S STRATEGY AND ACTIVITIES.....</b>	<b>12</b>
2.1. THE MAIN CLIMATE-RELATED RISKS AND OPPORTUNITIES HAVE BEEN IDENTIFIED.....	14
2.1.1. BNP Paribas is exposed to climate change risks.....	14
2.1.2. The energy transition also presents opportunities for BNP Paribas.....	16
2.2. BNP PARIBAS PLACES CLIMATE-RELATED ISSUES AT THE HEART OF ITS STRATEGY AND ACTIVITIES.....	17
2.2.1. BNP Paribas commits to a carbon neutral economy by 2050 .....	19
2.2.2. Corporate and Institutional Banking (CIB): BNP Paribas supports the transition of its corporate and institutional customers .....	22
2.2.3. Retail Banking and Specialised Businesses (CPBS): BNP Paribas supports the transition of SMES-ISES and individuals .....	23
2.2.4. Investment and Protection Services (IPS): BNP Paribas supports the transition of its investment customers .....	25
2.2.5. BNP Paribas is reducing its operational emissions and raising employee awareness.....	27
2.2.6. BNP Paribas takes part in public discussions and supports the dissemination of knowledge.....	28
2.3. RESILIENCE OF THE GROUP STRATEGY IN VARIOUS CLIMATE SCENARIOS .....	30
<b>3. RISK MANAGEMENT – IDENTIFICATION, ASSESSMENT AND MANAGEMENT OF CLIMATE-RELATED RISKS.....</b>	<b>32</b>
3.1. PROCESS USED TO IDENTIFY AND ANALYSE CLIMATE-RELATED RISKS.....	34
3.1.1. Climate-related risks are included in the BNP Paribas risk identification process.....	34
3.1.2. BNP Paribas incorporates climate-related risks in its scenario-based analysis systems for climate stress testing purposes.....	38
3.1.3. The country risk assessment is influenced by climate-related risks .....	41
3.2. CLIMATE-RELATED RISK MANAGEMENT PROCESS AND INCORPORATION IN OVERALL RISK MANAGEMENT .....	42
3.3. EXPLORATORY WORK TO BETTER UNDERSTAND PHYSICAL CLIMATE-RELATED RISKS.....	45
<b>4. METRICS AND TARGETS USED TO ASSESS AND MANAGE CLIMATE-RELATED RISKS AND OPPORTUNITIES.....</b>	<b>48</b>
4.1. BNP PARIBAS HAS ESTABLISHED METRICS TO ASSESS, MONITOR AND OVERSEE CLIMATE-RELATED ISSUES.....	50
4.1.1. BNP Paribas measures the alignment of its loan book with carbon neutrality scenarios .....	51
4.1.2. BNP Paribas measures the carbon footprint of its investment portfolios.....	54
4.1.3. BNP Paribas measures its support for the energy transition .....	54
4.1.4. BNP Paribas measures greenhouse gas emissions associated with its activity.....	55
4.2. BNP PARIBAS HAS SET QUANTITATIVE TARGETS FOR THE PURPOSE OF MANAGING CLIMATE-RELATED RISKS AND OPPORTUNITIES.....	56
4.2.1. BNP Paribas is committed to aligning its activities with a carbon neutrality trajectory.....	56
4.2.2. BNP Paribas has included climate-related targets in its 2022-2025 strategic plan.....	57
CONCLUSION .....	59
GLOSSARY .....	61
PHOTOS.....	63



TCFD\_2021\_BNPP\_EN | May 2022



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