



Barclays PLC  
Climate-related Financial  
Disclosures 2021



Barclays is a British universal bank. We support individuals and small businesses through our consumer banking services, and larger businesses and institutions through our corporate and investment banking services.

# Growing. Together.

## Our Purpose

We deploy finance responsibly to support people and businesses, acting with empathy and integrity, championing innovation and sustainability, for the common good and the long term.



Read more on why and how we are growing together on page 2 of our Annual Report at [home.barclays/annualreport](https://home.barclays/annualreport)

## ... influences our strategy ...

Our diversification, built to deliver double-digit returns



Strategic priorities to sustain and grow



Read more on our strategy on page 10 of our Annual Report at [home.barclays/annualreport](https://home.barclays/annualreport)

## ... which we will deliver through the Power of One Barclays ...



Read more on our business model on page 12 of our Annual Report at [home.barclays/annualreport](https://home.barclays/annualreport)

## ... creating positive outcomes for our stakeholders.

Customers and clients

Colleagues

Society

Investors



See our Key Performance Indicators on page 20 of our Annual Report at [home.barclays/annualreport](https://home.barclays/annualreport)

Which in turn helps us fulfil our Purpose

## Contents

Our climate-related financial disclosures form part of the Barclays PLC annual reporting suite.

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This report provides climate-related disclosures in line with the TCFD Recommendations. A summary of our climate-related financial disclosures in this report has been integrated into the Strategic Report and the ESG section of the Annual Report.

At the time of publishing this TCFD Report, we published Barclays PLC Annual Report 2021 (Annual Report) which is available at <https://home.barclays/investor-relations/reports-and-events/annual-reports/>. Barclays appointed KPMG to perform limited independent assurance over selected ESG content in the Annual Report which has been marked in the Annual Report with the symbol <sup>Δ</sup>. The assurance engagement was planned and performed in accordance with the International Standard on Assurance Engagements (UK) 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information and the International Standard on Assurance Engagements 3410 Assurance of Greenhouse Gas Statements. A limited assurance opinion was issued, which includes details of the scope, reporting criteria, respective responsibilities, work performed, limitations and conclusion, and is available on our ESG resource hub at: <https://home.barclays/sustainability/esg-resource-hub/>. Certain data assured by KPMG in the Annual Report has been reproduced in this TCFD report. This is marked in this TCFD Report with the symbol <sup>Δ</sup>. No other information in this TCFD Report has been subject to external assurance or audit.

Our experience, insight and adaptability help unlock opportunities.



See our back cover for an example of how we are growing, together.



### ESG Resource Hub

The Resource Hub provides detailed technical information, disclosures and our position statements on environmental, social and governance matters. It is intended to be relevant for analysts, ESG investors, rating agencies, suppliers, clients and all other stakeholders



[home.barclays/sustainability/esg-resource-hub/](https://home.barclays/sustainability/esg-resource-hub/)

### ESG Data Hub

This year, we have launched a new online ESG Data Hub located within the ESG Resource Hub, providing access to key ESG related metrics in a single place.



[home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/](https://home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/)

### ESG Additional Reporting Disclosures

We also provide additional information online, including progress reporting through our membership of initiatives such as the Principles for Responsible Banking (PRB), as well as reporting indices with reference to the relevant sector guidelines from the Sustainability Accounting Standards Board (SASB) and the Global Reporting Initiative (GRI)



[home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/](https://home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/)

## Introduction

Barclays is proud to continue to report under the TCFD framework

# Introduction

As I set out in my letter to shareholders in our Annual Report, published alongside this document, I believe that financial firms have a central role to play in the transition to a low-carbon economy, providing credit and intermediating investment.

The drive to net zero is one of the most significant forces of change facing our company, and our industry. Embracing this goal is one of Barclays' most important strategic priorities.

A robust approach to assessing and managing our exposure to climate-related risk is integral to our strategy to become a net zero bank by 2050. That is why we made the decision to make climate risk a Principal Risk at Barclays, reflecting our desire to ensure we are proactively managing climate-related risks across the organisation. This report sets out the detail on the way we assess those risks, as well as the opportunities we see.

In line with our commitment to offer shareholders a 'Say on Climate', we will be publishing an update on our climate strategy, targets and methodology in advance of the 2022 Annual General Meeting.



**C. S. Venkatakrisnan**  
Group Chief Executive Officer, Barclays



<p>Ambition to be</p> <h1>Net Zero</h1> <p>bank by 2050</p>	<p>Align all financing to Paris Agreement</p> <h1>15%</h1> <p>reduction in energy portfolio absolute emissions by 2025</p>
<p>Accelerate the transition to a low-carbon economy</p> <h1>£100bn</h1> <p>green financing by 2030</p>	<h1>30%</h1> <p>reduction in power portfolio emissions intensity by 2025</p>
<h1>£175m</h1> <p>investment in green innovation between 2020 and 2025</p>	

**“**  
*A robust approach to assessing and managing our exposure to climate-related risk is integral to our strategy to become a net zero bank by 2050.*

## Introduction continued

# Our climate strategy

Addressing climate change is an urgent and complex challenge. It requires a fundamental transformation of the global economy, so that society stops adding to the total amount of greenhouse gases in the atmosphere.

The financial sector has a critical role to play in supporting the economy to reach this goal. It is estimated that at least \$3-5 trillion<sup>1</sup> of additional investment will be needed each year, for the next 30 years, in order to finance the transition.

At Barclays, we are determined to play our part.

In March 2020, we announced our ambition to be a net zero bank by 2050, becoming one of the first banks to do so.

We have a strategy to turn that ambition into action:

# 1

## Achieving net zero operations

Barclays is working to achieve net zero operations and supply chain emissions, investing in the continued decarbonisation of our operations, and in the development of a net zero pathway for the emissions from our supply chain.

# 2

## Reducing our financed emissions

Barclays is committed to aligning its financing with the goals and timelines of the Paris Agreement.

# 3

## Financing the transition

Barclays is providing the green and sustainable finance required to transform the economies we serve.

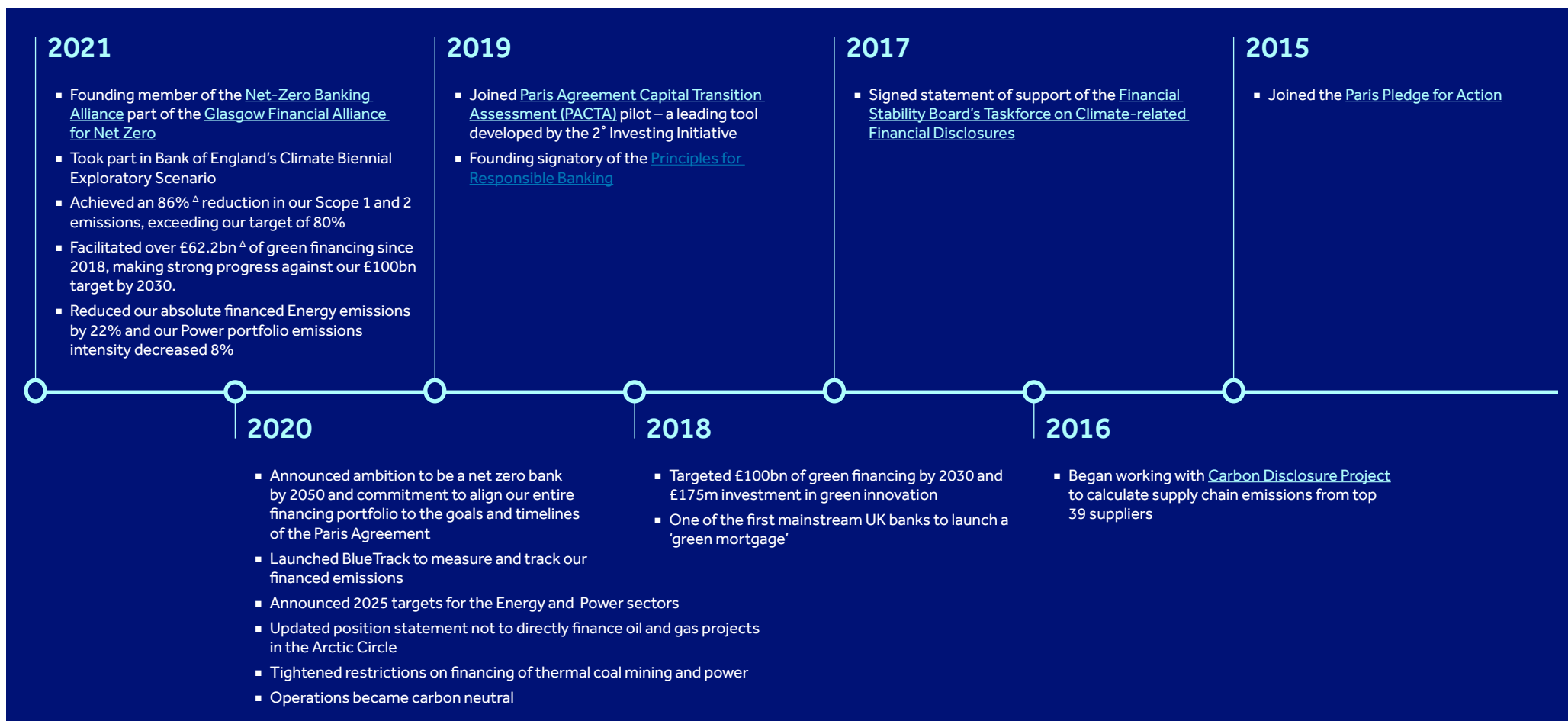
**Our strategy is underpinned by the way we assess and manage our exposure to climate-related risk. Climate risk is a Principal Risk under Barclays' Enterprise Risk Management Framework.**

### Note

<sup>1</sup> \$3-5trn as estimated in the GFMA/BCG (Global Financial Markets Association/Boston Consulting Group) Climate Finance Markets and the Real Economy report, December 2020.

## Introduction continued

# Timeline



Δ 2021 data reproduced from the Barclays PLC Annual Report subject to independent Limited Assurance under ISAE(UK)3000 and ISAE3410. Refer to the ESG resource hub for details: [home.barclays/sustainability/esg-resource-hub/](https://home.barclays/sustainability/esg-resource-hub/)

## TCFD summary

Section	Recommendation	Page reference
<b>Governance</b>	a) We describe the Board's oversight of climate-related risks and opportunities	7, 8
	b) We describe management's role in assessing and managing climate-related risks and opportunities.	7-9
<b>Strategy</b>	a) We describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term	11-13, 14-21
	b) We describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	13, 14-21
	c) We describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	13, 22-29
<b>Risk management</b>	a) We describe the organisation's processes for identifying and assessing climate-related risks.	34-41
	b) We describe the organisation's processes for managing climate-related risks.	34-41
	c) We describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	30-33
<b>Metrics and targets</b>	a) We disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	42-49, 50-52
	b) We disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	45, 47, 48
	c) We describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	45, 48, 50

### Say on Climate

In line with our commitment to offer shareholders a 'Say on Climate', we will be publishing an update on our climate strategy, targets and methodology in advance of the 2022 Annual General Meeting. This will include 2030 targets for two new sectors, Cement and Metals (Steel).

### UK Listing Rules Statement of compliance

We are pleased to confirm that we have included in our TCFD Report climate-related financial disclosures consistent with the four recommendations and the eleven recommended disclosures set out in the June 2017 report entitled Recommendations of the Task Force on Climate-related Financial Disclosures. This is our fifth TCFD Report. For ease of review and given the detailed and technical content of the TCFD Report, we have once again published this as a standalone report. In October 2021, the TCFD released additional guidance implementing the Recommendations of the Task Force on Climate-related Financial Disclosures (2021 TCFD Annex), which supersedes the 2017 Annex of the same name (2017 TCFD Annex). In line with the current UK Listing Rules (Listing Rules) requirements, our TCFD-aligned disclosures take into account the implementation recommendations in the 2017 TCFD Annex. In addition, we have considered the 2021 TCFD Annex and applied it where possible. Some recommendations in the 2021 TCFD Annex will require more time for us to fully consider. We will be working to implement the rest of the 2021 TCFD Annex recommendations over the course of 2022 and intend to apply these more fully in our next TCFD Report. Further details on the TCFD Recommendations and Recommended Disclosures are available at: <https://www.fsb-tcfid.org>

# Governance

Barclays' governance around climate-related risks and opportunities



## Governance structure

Oversight and management of climate-related issues are embedded within our governance structure. The Board and senior management have visibility of climate-related issues and set climate-related strategy and oversee its implementation.

# Governance structure

Barclays' governance structure consists of the Board, Board Committees, Executive and Management Committees across both business and legal entity lines.

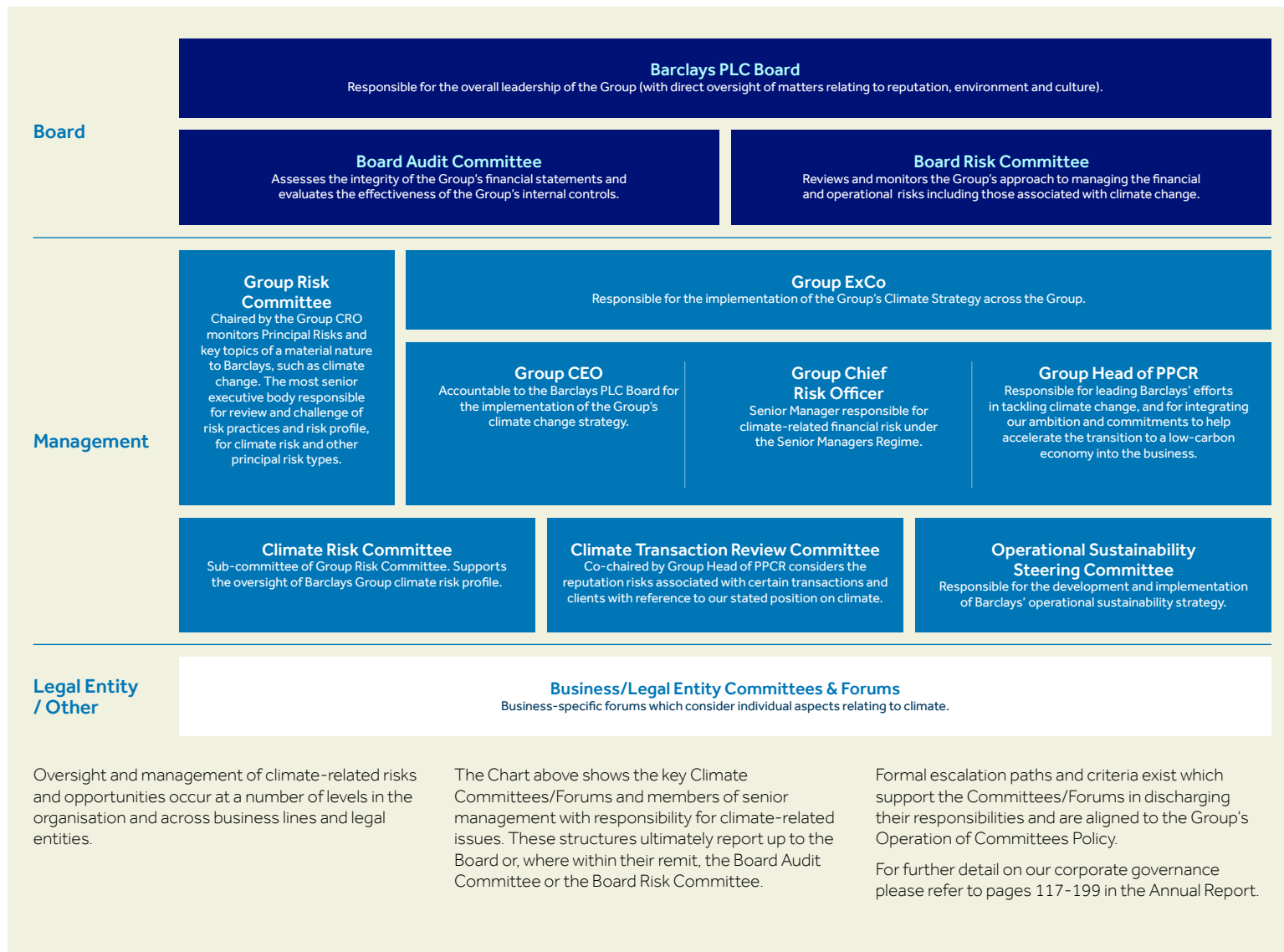
### Board oversight of climate-related risks and opportunities

#### Barclays PLC Board

The Barclays PLC Board sets the strategic direction and risk appetite of the Group and is the ultimate decision making body for matters of Group-wide strategic, financial, regulatory or reputational significance. The Board is also responsible for the oversight of social and environmental matters, including climate-related risks and opportunities.

During 2021, the Board received regular updates on Public Policy and Corporate Responsibility matters (together with Group Reputation Risk Reports) from the Group Head of Public Policy & Corporate Responsibility (PPCR). These updates covered matters such as key government and regulatory policy, regulatory engagement and ESG matters including climate. Four climate-specific updates were provided to the Board by the Group Head of PPCR and Group Head of Sustainability, covering areas such as progress on our climate strategy, policy updates, industry trends, stakeholder engagement and target-setting.

In addition to these Board briefings, the Group Head of PPCR regularly engaged with the Barclays Group Chief Executive, Chairman and Non-Executive Directors on a range of matters relating to the Group's climate strategy.



## Governance continued

In 2020 the Board set out our ambition to be a net zero bank by 2050. During 2021, the Board:

- monitored and provided oversight of Barclays' climate strategy and policies and discussed in detail its progress and evolution
- considered the proposed scope of the 'Say on Climate' vote that was announced at the 2021 AGM and which will be put to shareholders at the 2022 AGM
- reinforced its strategic climate leadership ambition including Barclays' status as a founding member of the Net-Zero Banking Alliance together with other banks across multiple countries
- reviewed the potential financial, operational, commercial and legal implications of Barclays' climate strategy
- considered climate-related data and reporting, and discussed how progress could be monitored
- agreed that the ESG report should form part of the Annual Report commencing with the 2021 Annual Report
- reviewed and approved the updated Enterprise Risk Management Framework (ERMF) which included climate risk as a Principal Risk with effect from 1 January 2022.

The Board is supported in its work by its Committees, each of which has its own Committee terms of reference, which clearly set out its remit and decision-making powers. This structure enables the Board to spend a significant proportion of its time focusing on the strategic direction of the Group. The Chairs of each of the Board Committees provide a report on the work of the Committee at every Board meeting.



**Please refer to the 'Key Board Activities in 2021' on pages 120 to 123 of the Barclays PLC 2021 Annual Report for details of key decisions taken by the Board in relation to climate-related matters.**

### Board Risk Committee (BRC)

The Barclays PLC BRC monitors and recommends the Group's financial, operational and legal risk appetite. It considers and reports on key financial and non-financial risk issues, and oversees conduct and compliance. It also monitors the Group's financial, operational, conduct and legal risk profile.

BRC began the year with a detailed training session on the financial and operational risks of climate change to enable BRC to deepen its understanding of this complex and evolving risk. The training session covered Barclays' governance in this space, progress made over the preceding 12 months and areas of key focus for 2021 and beyond.

BRC also received and discussed the results of a Climate Internal Stress Test. This assisted in deepening Barclays' understanding of climate risks, as did BRC's discussion about the scenarios for the 2021 Climate Biennial Exploratory Scenario (CBES) and Barclays' approach to climate specific modelling. BRC subsequently discussed and approved the results of the 2021 CBES.

For further details on our response to the CBES refer to the Scenario Analysis section on pages 22-29.

On a quarterly basis BRC reviews a Climate Risk Dashboard introduced in 2020. This provides BRC with updates on evolving climate risk governance and exposure to elevated risk sectors and countries across financial and operational risks.

The risks associated with climate change are increasingly well understood and, reflecting the importance of this global issue, climate risk will be elevated to become a Principal Risk within our ERMF from 1 January 2022. BRC reviewed the first Climate Risk Framework to support climate risk becoming a Principal Risk within the ERMF in 2022.

As part of the Group's strategic planning process, BRC recommended to the Board for approval the risk appetite statement consisting of both quantitative and qualitative statements.

BRC was also briefed by management on a variety of topical Operational risks including those relating to climate change.

### Board Audit Committee (BAC)

The Barclays PLC BAC assesses the integrity of the Group's financial statements. It also evaluates the effectiveness of the Group's internal controls. The impact of climate change on the Group's financial statements continues to be limited at this time, but this is an area that the BAC will continue to monitor.

### Management's role in assessing and managing climate-related risks and opportunities

Oversight and management of climate strategy is increasingly embedded in business-as-usual management structures, including a number of executive committees. These committees are mandated and form part of Barclays' formal governance architecture. They are convened to oversee a specific attribute of the Barclays control framework. Each committee is itself governed by terms of reference that lay out the duties, decision-making authority and escalation route of any material issues.

Reflecting the increasing risks associated with climate change, and to support Barclays' ambition to be a net zero bank by 2050, it was agreed that climate risk would become a Principal Risk within the ERMF from 2022 to run alongside our other Principal Risks types. The executive management committees receive regular briefings on matters including climate change. This management of the Principal Risk will run in parallel with our existing processes for managing the Reputation Risks associated with climate change.

### Group Executive Committee (Group ExCo)

Throughout 2021 the ExCo has been provided with regular updates on our climate strategy including progress on our commitments, stakeholder engagement and expectations, and target-setting. The Group Head of PPCR is a member of Group ExCo and is accountable for ensuring the Group's societal purpose is present in strategic decision-making at the highest levels in the organisation. The Group Head of PPCR regularly updates ExCo on a range of Public Policy and Corporate Responsibility matters, covering key government and regulatory policy, regulator engagement and ESG matters including climate. These updates include information about key industry trends and events, such as the creation of the Net-Zero Banking Alliance, COP26 engagement and Barclays support for the Global Investment Summit; as well as the evolving regulatory focus on climate change.

Executive Director bonus and Long Term Incentive Plan (LTIP) outcomes are assessed against a framework of measures, set by the Remuneration Committee. A proportion of both bonus and LTIP is driven by non-financial performance measures, including measures relating to climate. For the 2022 bonus and 2022-24 LTIP awards, 10% of the overall outcome for each will be determined by performance against Climate and sustainability measures, reflecting our ambition to be net zero by 2050, including our commitment to align our financing with the goals of the Paris Climate Agreement. See from page 162 in the Barclays PLC 2021 Annual Report for information on the 2022 LTIP.

## Governance continued

### Group Risk Committee (GRC)

The GRC is the designated forum to review and recommend, where necessary, submissions to the Board Risk Committee. The GRC is the most senior risk executive body and it monitors Principal Risks and key topics of a material nature to Barclays, such as climate change. Items that have been raised at GRC include the methodologies and results of the Climate Internal Stress Test, including impacts on retail and wholesale credit portfolios. Over 2021 GRC:

- discussed how the Climate Internal Stress Test assesses our vulnerability to a 'Disorderly' climate transition, noting that a transition to a low-carbon economy reduces the likelihood of such a scenario. The GRC discussed how to explore Barclays' vulnerability to a more severe physical risk under the 'Hot House World' scenario
- reviewed the 2021 CBES scenarios as well as the significant development of our climate modelling capabilities since the Climate Internal Stress Test
- reviewed the Draft Climate Risk Framework and approved the creation of the Climate Risk Committee from January 2022 which is a sub-committee of the GRC
- discussed the final version of the Climate Risk Framework ahead of its submission to BRC along with the eight other Principal Risk Frameworks. In addition, the Committee approved the Climate Risk Appetite constraint.
- received regular updates on the Climate Risk Dashboard which focuses on evolving climate risk governance and exposure to sectors and countries across financial and operational risks.

### Climate Risk Committee (CRC)

To support the oversight of Barclays' Group climate risk profile, the CRC was established in January 2022. The CRC is a subcommittee of the GRC, the most senior executive body responsible for review and challenge of risk practices and risk profile, for climate risk and other Principal Risks. The authority of the CRC is delegated by the GRC.

### Climate Transaction Review Committee (CTRC)

The CTRC is composed of members of ExCo and escalates directly to the Barclays Group CEO. The key functions of the CTRC are to consider the reputation risks associated with certain transactions and clients with reference to our stated position on climate<sup>1</sup> that could prevent Barclays from progressing its commitment to align our financing portfolio with the goals of the Paris Agreement and/or present significant reputation risk.

### Operational Sustainability Steering Committee

In 2021, we established the Operational Sustainability Steering Committee. Comprised of leadership from COO, HR, Communication, Climate Risk and Sustainability, this committee is responsible for the development and implementation of Barclays' operational sustainability strategy including carbon reduction plan and operational net zero ambition.

### Group Chief Executive Officer (Group CEO)

The Group CEO is responsible for driving Barclays' focus on external societal and environmental stewardship, and overseeing progress towards Barclays' climate ambition to become net zero by 2050. The CEO is Chair of the ExCo which regularly discusses climate strategy, and membership includes the Chief Risk Officer and Group Head of PPCR. The CEO is closely involved in identifying, accelerating and promoting the development of Barclays' climate and sustainable finance growth opportunities as we transition to a low-carbon economy.

### Chief Risk Officer

The Group Chief Risk Officer is accountable for all aspects of managing the climate-related financial and operational risks to Barclays. This encompasses the measurement, monitoring and limit setting for climate risk and the supporting governance.

### Group Head of PPCR

The Group Head of PPCR leads the bank's overall sustainability and citizenship agendas. Specifically, the role is responsible for leading Barclays' efforts in tackling climate change, and for integrating our ambition and commitments to help accelerate the transition to a low-carbon economy into the business.

### Group Head of Sustainability

During 2021 Barclays appointed a Group Head of Sustainability who leads the Sustainability and ESG team, and the strategic direction and execution of Barclays' policies and practices across a broad range of sustainability and ESG matters, including climate change. The role also oversees the development of standards and metrics to advance green and sustainable finance and to steward early innovation in sustainable product and service development.

This role is responsible for reputation risk issues arising from climate change, although the Board has overall responsibility for reputation matters generally. The Group Head of Sustainability reports directly to the Group Head of PPCR.

### Head of Climate Risk

The Head of Climate Risk was appointed in July 2020 as the Principal Risk Lead for Climate Risk. Being the head of the Climate Risk team, the role encompasses the development of climate risk governance, including ownership of the Group's Climate Risk Framework, making recommendations on risk appetite, constraints and exclusions to BRC, informed by Barclays' net zero ambition. Further responsibilities include leading the development of climate risk methodologies and our approach to carbon modelling, including the BlueTrack™ model. The Head of Climate Risk reports directly to the Group Chief Risk Officer, and is the Chair of CRC, a sub-committee of the GRC.

### Business/Legal Entity Committees & Forums

Barclays operates through a combination of formal mandated Committees and governance bodies/forums. The mandated Committee structure operates on a Legal Entity basis and will oversee climate-related issues relevant to that entity. Other governance bodies/forums typically operate across the Group and oversee climate-related issues, risks and opportunities within their remit and escalate material issues as appropriate.

#### Note

- [home.barclays/content/dam/home-barclays/documents/citizenship/ESG/Barclays-PLC-Climate-Change-2020.pdf](https://home.barclays/content/dam/home-barclays/documents/citizenship/ESG/Barclays-PLC-Climate-Change-2020.pdf)

# Strategy

The actual and potential impacts of climate-related risks and opportunities on Barclays' businesses, strategy and financial planning

## Strategy

At Barclays, we are determined to play our part in helping accelerate the transition to a low-carbon economy.

# Our strategy

### The context of our Strategy

The Intergovernmental Panel on Climate Change (IPCC) has concluded that the world must reach net zero emissions by around 2050 to limit global warming to 1.5°C above pre-industrial levels and avoid the worst consequences of climate change.

Meeting this urgent challenge will require three things. First, enormous scaling-up of low-carbon infrastructure and capacity, including renewable energy networks, energy efficiency, green transportation and sustainable food production. Second, a co-ordinated scaling down of carbon intensive activity, including fossil fuel consumption, across the global economy. Third, ambitious action that recognises the critical role of nature and protects, enhances and restores natural ecosystems such as forests and oceans.

It is also important that the economic opportunities presented by an orderly transition are shared widely and that negative impacts on energy security or development are avoided, including delivery of the UN's Sustainable Development Goals.

Increasing numbers of countries and companies have announced targets to limit emissions, but the world is not yet on track to limit global warming to 1.5°C. No single government, institution or corporation can address this challenge alone. Accelerating a just transition will be achieved through co-operation and collaboration between the public and private sectors.

### Our climate strategy

The financial sector has a critical role to play in helping to address climate change. It is estimated that at least \$3-5 trillion of additional investment will be needed each year, for the next 30 years, in order to finance the transition.

At Barclays, we are determined to play our part.

In March 2020, we announced our ambition to be a net zero bank by 2050, becoming one of the first banks to do so.

We have a strategy to turn that ambition into action, as set out in more detail from page 14 onwards:

#### 1. Achieving net zero operations

Barclays is working to achieve net zero operations<sup>1</sup> and supply chain emissions. Barclays has been carbon neutral for its scope 1<sup>2</sup>, scope 2<sup>3</sup> and scope 3 business travel<sup>4</sup> emissions since 2020.

We have achieved this by reducing or eliminating sources of carbon dioxide emissions associated with our operations and business travel and by compensating any remaining emissions by purchasing carbon credits under the Verified Carbon Standard (VCS). We intend to remain carbon neutral for scope 1, scope 2 and scope 3 business travel emissions, while investing in the continued decarbonisation of our operations and in the development of a net zero pathway for the emissions from our supply chain.

#### 2. Reducing our financed emissions

Barclays is committed to aligning its financing portfolios, in every sector, with the goals and timelines of the Paris Agreement. We continue our work on setting targets consistent with our commitment and NZBA requirements to reduce our financed emissions. We are also engaging with our clients to support their transitions to a low-carbon economy. We have clear restrictions on financing certain energy activities, including relating to thermal coal, oil sands, fracking and projects in the Arctic Circle.

#### 3. Financing the transition

Barclays is providing the green and sustainable finance required to transform the economies we serve. We are directing investment, including our own capital, into new green technologies and infrastructure projects that will build up low-carbon energy capability. We are also using our advisory, product sets and financial expertise to help our customers and clients realise their own transitions.

Our strategy is underpinned by the way we assess and manage our exposure to climate-related risk. From 2022, climate risk will be a Principal Risk under Barclays' ERMF.

### Climate-related risks and opportunities identified over the short, medium, and long term

We see the climate-related risks and opportunities for Barclays as falling into one of three categories.

The first category are those on our physical environment due to global warming and changing climate patterns. These are likely to lead to increased extreme weather events, which in turn could lead to economic loss for our customers and clients, as well as for our company.

The second category stems from efforts by governments, institutions and businesses to accelerate the transition to a low-carbon economy, which may result in policy and regulatory intervention, new market incentives or shifts in demand and behaviour that could lead to financial impacts on our customers and clients, and on Barclays. This can of course also lead to opportunities to support clients in their shift to new technologies and business models. The size and severity of these impacts will be affected by the rate of transition the world's economies undergo in the coming years.

The third is from connected risks or so called second order risks. For example, these could be reduced household affordability or recessionary pressures from the rise in credit defaults as a result of transition or physical impacts.

#### Notes

- Operations include company cars, offices, retail branches and data centres where Barclays have operational control.
- Scope 1 emissions include our direct GHG emissions from natural gas, fuel oil, company cars and HFC refrigerants.
- Scope 2 emissions include our indirect GHG emissions from purchased electricity and purchased steam and chilled water.
- Scope 3 business travel emissions are our indirect emissions from commercial air travel and other transport.

## Strategy continued

### Examples of identified climate physical risks and their potential financial impacts

#### Acute physical risk (event-driven) S, M, L

- These will impact on credit and market risk associated with counterparties and clients.
- Barclays' own operational resilience will mitigate against business disruption and damage to assets.
- Acute physical events are already happening in the short term but will likely continue to occur and become more widespread.

#### Chronic physical risk (shifts in climate pattern) M, L

- These risks could impact on entire sectors and geographic regions that the bank supports, as well as potentially impacting on the bank's own infrastructure.
- These shifts in climate pattern are expected to manifest in the longer term.

### Examples of identified climate transition risks and their potential financial impacts

#### Policy and Regulatory risk S, M, L

- Rapid policy or regulatory changes (e.g. carbon taxes, tightening of energy efficiency standards) could lead to increased credit risk of clients and counterparties and could alter the definitions of green and sustainable products.
- In certain jurisdictions, legislators and policymakers are increasingly focused on building a regulatory framework for the management of the financial risks arising from climate change. These include, among other things, regulations and/or policies on climate risk management, climate stress testing, taxonomy and disclosure. Compliance with these requirements may increase the costs as well as operational and reputational risk on firms with cross-border businesses (as well as the bank), where there is a material divergence in climate regulations and policies in the different jurisdictions in which impacted firms operate.

#### Technology risk S, M, L

- New evolving and disruptive technologies could lead to substantial and rapid changes in costs of production and operation, competitiveness, supply and demand in certain sectors – which could impact on credit risk of clients and counterparties.
- The risk of this occurring exists now and in the future.

#### Legal risk S, M, L

- Clients could face potential litigation as a result of the environmental impact of their business activities or their approach to addressing climate change, which could lead to credit risk for the bank where we have exposure to them and the Group could similarly face climate-related litigation or enforcement action in relation to how climate change related risks are addressed.
- There is some evidence that this is an emerging risk which could continue into the future.

We recognise that the financial sector has a critical role to play in supporting the economy to transition and to avoid the worst impacts of climate change. It is estimated that at least \$3-5 trillion of additional investment will be needed each year, for the next 30 years. Helping to finance the transition is a key part of our climate strategy and we have developed specialised teams to help us deliver this – see page 15 further below.

When considering climate-related physical and transition issues, Barclays assesses them through the following short, medium and long term timescales:

Short term	0–1 year
Medium term	1–5 years
Long term	5–30 years

Risks arising from climate change materialise through various channels, including through the financial services and support we provide to customers and clients who may be exposed. They may also arise through the operation of our own infrastructure and physical premises, which may be exposed to both transition and physical risk, or through reputational risk to Barclays if the company is not seen to be adequately supporting the transition to a low-carbon economy.

Due to the increasing risks associated with climate change, and to support Barclays' ambition to be a net zero bank by 2050, in 2020, the Board Risk Committee made the decision that climate risk would become a Principal Risk within the ERM from 2022. To support this decision, work was undertaken in 2021 to develop a Principal Risk Framework underpinned by Governance, including a Climate Risk Framework and controls.

## Strategy continued

This decision recognises that climate risk is relevant and material enough to merit establishing a specific company-wide control Framework, in line with other Principal Risks. It also reflects our intention to ensure we are proactively managing climate-related risks across the organisation.

The elevation of climate risk to Principal Risk has included a number of exercises that assess the materiality of climate-related risks to the business including a stocktake exercise that documented where climate risk exposure exists and its materiality. Further detail on the climate-related risks potentially arising in the short, medium and long term that could have a material financial impact on the Group and the processes used to determine these risks can be found within the Risk Management section along with a more detailed description of how we assess and manage climate-related risks. This is set out in pages 31-41.

For metrics relating to our assessment of sectors at elevated risk from physical and transition impacts including concentrations of credit exposure to carbon-related assets please see the Metrics & Targets section on page 51.

### Resilience of our strategy, taking into consideration different climate-related scenarios

We conduct analysis of the magnitude of impacts on our business from climate risks through Scenario analysis. This means we look at potential outcomes – from a rapid transition of the global economy through to minimal transition over the coming decades – and consider the impact on Barclays.

Barclays started to explore climate scenario analysis and more specifically stress testing as early as 2018 and during 2021, we took part in the Bank of England's Climate Biennial Exploratory Stress Test. While climate stress testing is still at an exploratory phase across our sector, our work to date, using certain assumptions, indicates that our business<sup>1</sup> is resilient to all scenarios explored under the CBES. We have started to explore how our strategic approach to climate change would mitigate risks under a scenario where there is early and orderly transition as well as under a scenario where there is late and disorderly transition.

For further description of the resilience of our strategy, taking into consideration different climate-related scenarios, including a lower than 2°C scenario please refer to page 29.

<sup>1</sup> Our work to date has focused on the impact on our balance sheet

### The impact of climate-related risks and opportunities on our businesses, strategy, and financial planning.

As part of our strategy to turn our net zero ambition into action, we are working to address the impacts of climate-related risks across our businesses and functions. We are also working to identify opportunities.

The implementation of our strategy is not only impacting our products and services, but also our operations. We have already started evolving new processes and capabilities and are embedding them into our operations to address increasing complexity, including building technology solutions where required to support oversight, management and reporting processes. This involves all key businesses and functions and is delivered through a centrally-managed programme, supported by extensive change management expertise.

We have started to consider how to embed our climate strategy and the impact of climate-related issues into our financial planning processes. We are developing processes and levers that will begin to impact on the business we engage in. For example:

- we strive to continue to decarbonise our own operations, reducing our scope 1 and 2 emissions
- we are tracking progress towards portfolio alignment with the goals of the Paris Agreement through BlueTrack™, which includes a number of portfolio alignment metrics. Additionally the financial plan takes into consideration the Group's climate change strategy and targets, but the financial implications are likely to be more material in the longer term. The metrics are subject to second line review by the Climate Risk team to assess the strategy against the targets

- we continue to develop our green and sustainable banking product sets, including for retail customers, including green mortgages, bonds, loans and investment funds
- we have been exploring climate scenario analysis and stress testing as a tool to assess and quantify the potential impacts on our business from climate change
- we conduct portfolio reviews to monitor that business activities conducted are within Barclays' mandate (i.e. aligned with expectations), and are of an appropriate scale (relative to the risk and reward of the underlying activities). Mandate & Scale Exposure Controls form part of our overall risk appetite control framework and climate risks have been integrated into annual credit portfolio reviews for elevated risk sectors since 2020.

We will continue to embed our climate strategy into the way we think about financial planning over the coming years. As disclosure requirements and regulation continue to evolve, we expect to take these into consideration as we develop our financial strategy.

## Strategy continued

### Our Climate Strategy

#### 1. Achieving net zero operations

Barclays is working to achieve net zero operations<sup>1</sup> and supply chain emissions. Barclays has been carbon neutral for its scope 1<sup>2</sup>, scope 2<sup>3</sup> and scope 3 business travel<sup>4</sup> emissions since 2020. We intend to remain carbon neutral, while investing in the continued decarbonisation of our operations and in the development of a net zero pathway for the emissions from our supply chain.

We are defining net zero operations as the state in which we will achieve a GHG reduction of our scope 1 and 2 emissions by at least 90% against a 2018 baseline and use carbon removals to eliminate any residual operational emissions that we cannot yet abate.

We are defining carbon neutral as first reducing carbon dioxide emissions then counterbalancing carbon dioxide emissions from scope 1, scope 2 and scope 3 business travel with carbon offsets.

In 2020, we disclosed that we were already net zero from our own operations, based on the common understanding at that time, that net zero and carbon neutral were interchangeable terms. To reflect the most recent interpretations of both of these terms in public disclosure, we will make a distinction between net zero operations and carbon neutral in our disclosures from now on.

The standards available to understand and define net zero are rapidly evolving. We will continue to review and develop our own approach to net zero operations as this subject area matures.

We have been carbon neutral since 2020, by reducing or eliminating sources of carbon dioxide emissions associated with our operations and business travel and by compensating any remaining emissions by purchasing carbon credits under the Verified Carbon Standard (VCS).

#### 2. Reducing our financed emissions

Most of our emissions result from the activities of the clients that we finance and those generated in their respective value chains. These are so-called 'financed emissions' and fall within the general definition of Scope 3 emissions.

In November 2020, we published details of our strategy for measuring and managing alignment of our financing with the goals and timelines of the Paris Agreement. Our approach is underpinned by BlueTrack™, a methodology we have developed for measuring our financed emissions and tracking them at a portfolio level against the goals of the Paris Agreement. BlueTrack™ builds on and extends existing industry approaches to cover not only lending, but also capital markets financing. This better reflects the breadth of our support for clients through our investment bank.

BlueTrack™ starts by selecting an appropriate benchmark for a sector, which defines how financed emissions for a portfolio need to change over time in line with the goals of the Paris Agreement. We then determine how our sector portfolios are performing against these benchmarks: by measuring the emissions that our clients produce, determining how those emissions should be linked to the financing we provide, and then aggregating those measurements into a portfolio-level metric. This portfolio-level metric is then compared to the benchmark. This approach allows us to make active choices to re-shape our portfolio within our 'carbon limit' for each sector. This reflects our focus on transition and shows specifically how we are accelerating the shift from higher-carbon to lower-carbon activity. For this reason, BlueTrack™ does not currently take into account carbon offsets purchased at a client level or at a portfolio level.

We are setting targets, informed by Paris-aligned benchmark scenarios, to reduce our financed emissions. We also have clear restrictions on financing certain energy activities, including relating to thermal coal, oil sands, fracking and projects in the Arctic Circle.

The metrics used to calculate a sector's carbon emissions can be either an absolute carbon emission or carbon emission intensity metric. The most appropriate choice of metric for each sector depends on the nature of the portfolio being measured, and how far its carbon emissions have already reduced. Generally speaking, we believe that most portfolios will be best measured primarily using carbon emissions intensity, at least in the earlier stages of de-carbonisation. This encourages transition to lower emitting fuel sources. The Power sector, which is responsible for generating the world's supply of electricity, is best measured initially using an intensity metric.

An exception to our general measurement approach is the Energy sector, which is responsible for extracting fossil fuels from the earth – mainly coal, oil and gas. It is different because it cannot reduce its carbon emissions intensity below a certain point (a barrel of oil cannot be de-carbonised), and so a reduction in absolute carbon emissions is the more appropriate measure.

We have already used BlueTrack™ to assess the financed emissions of our client portfolios in the Energy and Power sectors, prioritising these two sectors because they are responsible for up to three quarters of all Greenhouse Gas (GHG) emissions globally and because Barclays has meaningful exposure to them. Therefore, they represented the most appropriate starting place from which to make a significant difference. In November 2020, we set a target for a 30% reduction in the CO<sub>2</sub> intensity of our Power portfolio by 2025, as well as a target for a 15% CO<sub>2</sub> reduction in absolute emissions of our Energy portfolio by 2025. Progress against both these targets can be found on pages 47-48 of the Metrics & Targets section.

As a founding member of the Net-Zero Banking Alliance, we intend to use science-based decarbonisation scenarios to set targets for a number of high emitting sectors by 2024.

We believe that Barclays can make the greatest difference by supporting the transition to a low-carbon economy, rather than by simply phasing out support for some of the clients who are most engaged in it. We believe that banks, especially those like Barclays with a large capital markets business, are in a unique position to help accelerate the transition by working with companies that are in the process of moving away from fossil fuels to renewables, as many of our clients have already begun to do. This is particularly true in the energy sector, which is already changing rapidly and we are supporting our clients as they transition to less carbon intensive sources of energy, adopt new technologies and increase electrification. Barclays takes a considered approach to clients in sectors with higher carbon-related exposures or emissions from extraction or consumption; we do not think that simple divestment achieves the aim of supporting the transition of the economy and may not reduce emissions if it drives companies to alternative sources of finance with less transparency and accountability.

#### Notes

- 1 Operations include company cars, offices, retail branches and data centres where Barclays have operational control.
- 2 Scope 1 emissions include our direct GHG emissions from natural gas, fuel oil, company cars and HFC refrigerants.
- 3 Scope 2 emissions include our indirect GHG emissions from purchased electricity and purchased steam and chilled water.
- 4 Scope 3 business travel emissions are our indirect emissions from commercial air travel and other transport.



## Strategy continued

We are therefore continuing to work with clients in key sectors, to gain a more detailed understanding of the risks and challenges that the client is facing believing it is better to engage with clients in relation to transition, rather than simply walking away from financing for individual companies. We recognise there may be companies or particular activities that cannot transition over time, and in such cases we believe those clients will find it increasingly difficult to access financing, including through Barclays. However, we firmly believe that working with clients to facilitate their own transition to a low-carbon economy is the best way to make meaningful change.

To achieve this, we are engaging with our clients to understand their transition to less carbon intensive sources of energy. There are certain sectors where the transition is most critical, and we know that our scale, expertise, and financing power can play an important role in helping to accelerate the transition. We understand that many of our clients, from Small and medium-sized enterprises (SMEs) to global corporations with significant carbon footprints have started the process of adapting their business models to make them more sustainable, including committing significant resource to this process, and a growing number have made public commitments to becoming net zero over the course of the next few decades.

Achieving our targets will largely depend on our clients' progress on their individual transition pathways. Many of our clients have published their own transition plans and report on their progress; other clients have not yet made their transition plans public. We assume that, over time, more clients will publish plans and also that many of our clients will be able to accelerate their plans beyond what is known today. Progress towards our targets will not necessarily be linear. In the short term, we may experience significant decreases or increases in our metrics, partly due to the volatility of the mix and volume of capital markets financing (included in our metrics) which is generally beyond our control and due to the pace of our clients' emission reductions.

We also have clear restrictions on financing certain energy sector activities, including relating to thermal coal, oil sands, fracking and projects in the Arctic Circle.

### 3. Financing the transition

The transition to a low-carbon economy is today's defining opportunity for innovation and growth. There is a significant opportunity for Barclays to play a leading role in helping to meet the demand for climate change related financing to support the transition.

We are directing investment, including our own capital, into new green technologies and infrastructure projects that will build up low-carbon capacity and capability.

Barclays continued to make significant progress in 2021 against our target to facilitate £150bn of social, environmental and sustainability-linked financing from 2018 to 2025. On a cumulative basis, by year end 2021 we have facilitated £193.3bn<sup>Δ</sup> of social, environmental and sustainability-linked financing since 2018, exceeding our target four years early.

We have also set a target to facilitate £100bn of financing specifically focused on green activities by 2030. We facilitated £29.8bn<sup>Δ</sup> of green financing in 2021, up 69% from £17.6bn in 2020 and comprised of:

- labelled, 'use of proceeds' and business mix financing in environmental categories (£22.6bn<sup>Δ</sup> in 2021), and
- sustainability-linked financing that incorporates environmental performance targets (£7.2bn<sup>Δ</sup> in 2021).

Since 2018, a total of £62.2bn<sup>Δ</sup> has been facilitated across these categories, with significant momentum across our businesses, products and geographies.

Our Sustainable Impact Capital Programme, led by the Barclays Principal Investments team in Treasury has a mandate to invest up to £175m of equity capital in sustainability-focused start-ups by 2025, helping to accelerate our clients' transition towards a low-carbon economy.

The Programme has made meaningful progress towards its five year trajectory to meet our target by building a portfolio of strategic investments which have a focus on reducing carbon footprints and accelerating towards a low-carbon economy. £54m of the £175m overall target has been deployed since 2020, with £30m invested in 2021, up 25% from 2020.

Detail on our progress against these targets can be found on page 49 of the Metrics & Targets section.

We also continue to develop our green and sustainable banking product sets, including for retail customers, including green mortgages, bonds, loans and investment funds.

In January 2022 the Group CEO created a Climate & Sustainable Finance Council, designed to help identify, accelerate and promote the development of Barclays' climate and sustainable finance growth opportunities. This includes opportunities for our customers and clients across all our businesses, products and services, as well as opportunities that could have a material financial impact on Barclays. It is chaired by the Group CEO and comprised of senior stakeholders from across the business.

The council will support our multi-disciplinary group of bankers to deploy these solutions and capture these opportunities. This integrated approach brings together a number of teams across the organisation as shown in the graphic.

As a bank, we believe that we can have the greatest impact by collaborating with our clients as they decarbonise their businesses and make progress towards net zero ambitions. For Barclays and our clients, this will require collaboration with partners and broader stakeholders, to support innovation and manage climate-related risks.

We have summarised in this next section the processes undertaken in 2021 to identify, accelerate and promote climate-related opportunities with respect to climate change related financing.

<sup>Δ</sup> 2021 data reproduced from the Barclays PLC Annual Report subject to independent Limited Assurance under ISAE(UK)3000 and ISAE3410. Refer to the ESG resource hub for details: <https://home.barclays/sustainability/esg-resource-hub/>

# Strategy continued

## Developing and deploying financing solutions

### Supporting clients across the spectrum



### Sustainable Capital Markets

The Sustainable Capital Markets team is embedded into Barclays' wider capital markets team within the Investment Bank. This global team offers a broad range of ESG capital market product types and delivers across multiple client segments to help clients finance their sustainability journeys and formalise their sustainability commitments. The team focuses on underwriting and structuring green, social and sustainability use of proceeds bonds, and sustainability-linked bond issuance. The team continued to execute a range of landmark transactions in 2021 such as helping the UK Government issue its inaugural £10bn green gilt.

### Sustainable & Impact Banking ('SIB')

SIB is a dedicated sector coverage team focused on advising and raising capital for emerging climate technology companies across four key verticals: clean energy, sustainable materials & recycling, food & agriculture tech, and water. SIB also advises our existing banking clients on their energy transition (ESG Advisory). Regular interaction with ESG funds and other stakeholders inform our client dialogue.

### Corporate Bank Sustainable Product Group

The Sustainable Product Group focuses on increasing sustainable dialogue with our Corporate Banking clients as well as delivering a broad range of green and sustainable banking products. In addition to corporate and project financing, in 2021 the team expanded Corporate Banking's offering to include green and sustainability-linked trade, debt and fund financing products. The Sustainable Product Group offer Corporate Banking clients connectivity with other teams in the Corporate and Investment Bank and wider Barclays Group.

## Strategy continued

### Responsible investing

At Barclays Private Bank, we view responsible investing as an important part of our investment strategy. This involves engagement and voting, as well as incorporating ESG factors (amongst others) into investment analysis and decisions. This assists us with our efforts in managing and mitigating ESG risks which can materially impact long-term company and portfolio returns.

Our Discretionary Portfolio Management offering sits at the core of the Private Bank's long-term strategy. The analysis of ESG factors forms an important part of our investment due diligence for all of our Private Bank discretionary investment strategies globally<sup>1</sup>. We believe that ESG provides insights into the operational quality of a business and its ability to mitigate against risks to future cash flow, and thereby helps us to make better investment decisions.

Launched in 2018, our Sustainable discretionary strategy invests in companies that generate revenues from products and services that help to address the United Nations' SDGs.

Wealth Management factors responsible investing into our discretionary portfolio and fund investment solutions. For clients seeking to explicitly target positive environmental and social outcomes, we manage and offer a retail fund called the Barclays Multi-Impact Growth Fund. It brings together a range of external funds, in both equities and bonds, each of which focuses upon holding companies that aim to have a positive impact on either the environment or society.

### Retail Banking

Sustainability is a key focus area for Barclays UK. We want to help customers live a more sustainable lifestyle by creating opportunities for them to implement green changes. We are actively engaging with our retail customers to better understand how we can provide greener solutions to meet their needs.

We are working closely with our partners such as Barclays Partner Finance on key focus areas to help customers on their journey from education to implementing solutions. We are focusing on creating and curating opportunities to enable customers to improve the energy efficiency of their homes, tracking and offsetting their carbon footprint and making more sustainable choices in their day-to-day spending. By working collaboratively under a unified strategy across Barclays UK, we aim to further expand our green products and propositions to meet customers' aspirations.

### Treasury Green Activities

Barclays' Treasury plays a key role in ensuring Barclays meets its climate goals by allocating, managing and governing its financial resources effectively. This includes partnering with and encouraging business areas to advance strategic climate objectives and executing principal transactions to promote environmental financing.

For further detail on Treasury Green Activities, see page 74 of the Barclays PLC 2021 Annual Report.

### Sustainable Impact Capital

Our Sustainable Impact Capital Programme, led by the Barclays Principal Investments team in Treasury has a mandate to invest up to £175m of equity capital in sustainability-focused start-ups by 2025, helping to accelerate our clients' transition towards a low-carbon economy.

From the acceleration of innovative carbon-efficient technologies and supply chains to supporting the development of viable markets for carbon capture and sequestration, the Programme is seeking out and supporting clear, scalable propositions that deliver both environmental benefits and economic returns.

Through the Programme, we aim to fill growth stage funding gaps to help accelerate and scale catalytic and strategic solutions to environmental challenges.

The Programme has made meaningful progress towards its five year trajectory to meet our target by building a portfolio of strategic investments which have a focus on reducing carbon footprints and accelerating the transition to a low-carbon economy. £54m of the £175m overall target has been deployed since 2020, with £30m invested in 2021, up 25% from 2020.

In 2022, the Programme will continue deploying capital to foster innovation to support Barclays' net zero ambition.

See page 49 in Metrics & Targets for progress to date.



#### Note

<sup>1</sup> With the exception of services provided in India.

## Strategy continued

### Building our expertise

We continue to invest in our resource and capabilities to support execution of our climate strategy.

In our specialist sustainable banking teams, we have invested in capacity at all levels including a number of senior hires to better support our clients and deliver our £100bn green financing target. In our sector coverage teams, we have provided training to our bankers to increase their climate knowledge and facilitate client engagement.

In 2021, we provided sustainability & ESG training to circa 12,000 colleagues and a further circa 5,500 also received climate change specific training. Bankers operating in sensitive sectors subject to restrictions have undertaken mandatory training to supplement our control framework and better equip them for engagement with clients.

Within Barclays Execution Services we have also built out our internal support and advisory services, for example the appointment of a new Group Head of Sustainability to assist the Group Head of PPCR in developing and implementing the Group's climate and sustainability agenda.

Our Risk and Finance functions have also built out our capability and capacity to further develop BlueTrack™, our methodology for measuring financed emissions and tracking them against the goals of the Paris Agreement, our climate stress testing and our climate reporting infrastructure.

### Spotlight on ESG research

Barclays Research has made significant investments to grow its ESG research capabilities and thought leadership. We hired a Global Head of Cross Asset ESG Research at the beginning of the year who built a new ESG Research team of subject matter experts to support the consistent integration of ESG and sustainability considerations across all our research and investment recommendations. Our approach to ESG research is differentiated in two ways, yielding much broader-based engagement with ESG issues and higher quality insights for our investor clients.

Firstly, Barclays is hiring experienced sustainability experts in order to help deliver deep expertise and ensure the latest technical sustainability knowledge is informing our research. This enables the critical assessment and sourcing of the most appropriate ESG information and data and drives in-depth materiality assessment in collaboration with coverage analysts. Secondly, this team is focused on building the ESG knowledge and capabilities of all research analysts, providing resources and tools to enable broad integration of ESG considerations across our global research.

For further details on our ESG research, see page 74 of the Barclays PLC 2021 Annual Report.

### Client engagement

We want to be alongside clients as they transition to a low-carbon economy, using our advisory and financial expertise to help them navigate this period of extraordinary change.

As trusted advisors, we continue to proactively engage with many of our larger clients on both the risks and opportunities for their businesses. To enable us to provide the appropriate advice and capital solutions, we also encourage clients to use standardized climate disclosures. For instance, in 2021, we engaged with approximately 50 clients across the Power, Energy, Cement and Metals sectors to encourage them to disclose environmental and sustainability information via CDP\*. To facilitate this, we enhanced our existing partnership with CDP to make it easier for clients to use their processes and source required information. Other examples of support to help clients execute on their climate strategies this year include facilitation of initial public offerings for green growth companies, acquisitions of emerging technology start-ups to diversify incumbent clients' business models and financing to mobilise decarbonisation of operational activities.

This year, we recorded over 5,000 conversations with mid-sized corporate clients on ESG topics, including a 95% increase in the last two quarters thanks to focused efforts by relationship teams to raise ESG topics proactively. We are also using our thought leadership to help support client thinking as it evolves, capitalising on our in-house ESG Research capability. Clients who have access to this material often tell us it prompts greater evaluation of their business needs, and we have seen a number of instances of this leading to broader conversations about the transition to a low-carbon economy and the ways Barclays is on hand to support. In 2021, we published circa 350 meaningful ESG-focused research reports, an increase of over 100% on 2020.

We have run a number of pilot client engagement programmes, including a 'Test and Learn' series held for over 100 SME clients. This series aimed to better understand the support that we could offer to clients on their transition to net zero.

### Industry engagement

We believe that industry co-operation, particularly in setting common standards and transparent reporting, is important for all our stakeholders. We continue to engage with peers, industry experts and academics to assess the transition to a low-carbon economy and consider emerging methodologies and taxonomies. Barclays has signed the statement of support of the Financial Stability Board's (FSB) TCFD and has aligned its disclosures since 2017. In 2021, we were a founding member of the Net-Zero Banking Alliance, part of the Glasgow Financial Alliance for Net Zero. We lead and participate in numerous industry working groups listed on page 55. Examples of our engagement in 2021 include co-chairing a Net Zero Working Group of HRH The Prince of Wales' Sustainable Markets Initiative's Financial Services Taskforce, which published a Net Zero Practitioner's Guide for banks, developed through the collective knowledge and experience of 11 member banks, to help the banking industry adopt a consistent and transparent approach to supporting clients' transition to net zero.

[https://a.storyblok.com/f/109506/x/a2be4f2b85/20211015\\_practitioners-guide-vfinal.pdf](https://a.storyblok.com/f/109506/x/a2be4f2b85/20211015_practitioners-guide-vfinal.pdf)

\*CDP (formerly the Carbon Disclosure Project) is a not-for-profit charity that runs a global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts.

## Strategy continued

Barclays, as a member of the Partnership for Carbon Accounting Financials (PCAF), also co-Chaired a Capital Markets Working Group of six global banks that are developing a methodology to account for the emissions associated with the activity that banks undertake to facilitate capital markets transactions. During 2021, the group published a discussion paper, which was put to public consultation, as a precursor to further work on the methodology during 2022.

<https://carbonaccountingfinancials.com/files/consultation-2021/pcaf-capital-market-instruments-paper.pdf>

### Government/public policy engagement

Policy makers are central to making the shift to a low-carbon economy. Governments and legislatures have the ability to commit to a strong position, create an appropriately ambitious policy environment, and drive consistency across sectors. We seek to work closely with governments in the geographies in which we operate to support the development of practical and ambitious policies where appropriate. We support the creation of national green finance strategies, such as the UK's aim to be the world's first Net Zero-aligned Financial Centre, which aims to ensure financial flows shift towards supporting the UK's legally binding net zero targets. As a major economic contributor – whether via the customers and clients we serve, the colleagues we employ, or the tax we pay – we believe it is important to contribute towards relevant public policy debates. To this end, we engage in activities that could either directly or indirectly influence public policy on climate-related issues through direct engagement with policy makers, trade associations, and funding research organisations. These include, but are not limited to, the UK Green Finance Institute, UK Finance, the

Confederation of British Industry (CBI), the Association for Financial Markets in Europe (AFME) and the Institute of International Finance (IIF). On a senior level we are on the board of UNEP FI and also a member of a number of industry bodies, for more details refer to page 55. Some examples of public policy issues we have engaged on include the upcoming UK Taxonomy, improving home energy performance, and the EU's Sustainable Finance Strategy.

We endeavour to advance our climate change policy through the trade associations of which we are members. Many positions taken by trade associations result from negotiation and compromise among members with different or opposing views. We will contribute to these processes, seeking to influence how they evolve. Where a trade association's position on climate change does not align with our position, we will challenge it and otherwise seek to make our view clear. Barclays reserves the right to publicly dissent from a trade association's position. Should a trade association adopt a material position that is irreconcilable with our values or strategy, we are prepared to end our membership.

### Just Transition

Barclays recognises the need to sustain and support livelihoods and communities in the UK and around the world as we support our clients to transition to a low-carbon economy. A Just Transition is essential for achieving the goals of the Paris Agreement. The Paris Agreement envisages that appropriate financial resources, new technology and an enhanced capacity building framework are put in place to support action by those countries most vulnerable to the impacts of climate change. Governments and the private sector each have roles to play in ensuring that the transition to a low-carbon economy is not carried out at the expense of vulnerable communities, social welfare, and access to decent work and quality jobs. Financial institutions have a role to play in integrating social considerations into their supply chains, policies, and decision-making as part of their participation in the transition to net zero.

In 2021, Barclays joined over 40 financial institutions and stakeholders to form the Financing a Just Transition Alliance (FJTA), co-ordinated by the Grantham Research Institute on Climate Change and Environment at the London School of Economics (LSE). The Alliance aims to translate the concept of a just transition into tangible steps and

outcomes. In 2021, Barclays contributed to the report, 'Just Zero: 2021 Report of the UK Financing a Just Transition Alliance', which sets out requirements for a just transition in the UK, while highlighting potential applications in an international context.

The report featured a Barclays case study, focusing on Barclays' Rebuilding Thriving Local Economies (RTLE) programme. The RTLE is a five-year initiative, launched in 2018, that aims to boost local economies across the UK through co-operation with local authorities, academics, schools and business groups. The coastal community of Great Yarmouth was announced as a RTLE pilot area in March 2021; its large offshore wind sector represents a growing industry key to the decarbonisation of the UK's energy supply. While in the early stages of this pilot, Barclays began to scope out ways to help facilitate a Just Transition, focusing on two areas – supporting local businesses and addressing the local skills gap. Barclays will work directly with businesses, business groups and local business leadership to help them find opportunities for growth and job creation from the transition.

## Strategy continued

### Our approach to nature and biodiversity

Nature and biodiversity are intrinsically connected to efforts to mitigate and adapt to the effects of climate change and are vital to ensuring a sustainable economy and healthy society. The financial sector will have an important role to play in stewarding responsible finance and in supporting new financial flows for a nature-positive future. As a financial services institution, this includes understanding and evaluating the ways in which our financing activities impact on nature. It also includes the ways in which the organisation is dependent on nature and functioning ecosystems.

Barclays has relationships with customers and clients across a wide range of sectors and geographies, who face risks to their operations, supply chains and markets from biodiversity loss and land-use change. Recognising the importance of this agenda, we are developing our understanding and evaluating the Group's environmental impacts and dependencies as well as where we can support our clients through the transition to a nature-positive economy.

Collaboration both within and across industries is essential to this transition. Barclays is pleased to be a member of the Taskforce on Nature-related Financial Disclosures (TNFD) Forum. We also joined the Get Nature Positive commitment alongside other businesses to identify opportunities to take nature-positive action. Recognising deep interlinkages across environmental and social themes,

it is necessary to view our work on nature and biodiversity, which includes our approach to deforestation and human rights on page 78 of the Barclays PLC 2021 Annual Report, in tandem with our work on climate as summarised on pages 100 to 101 of the Barclays PLC 2021 Annual Report.

#### Nature-related risk in financing

We intend to do more to assess and minimise negative impacts of our financing activities on nature. We have included financing restrictions that seek to address biodiversity risk within our position statements on Forestry and Agricultural Commodities, World Heritage Sites and Ramsar Wetlands, and Climate Change.

Barclays has engaged with a number of emerging methodologies to assess nature-related impacts and dependencies at a portfolio level. In 2021, Barclays contributed to initial developments of the Natural Capital Finance Alliance's ENCORE biodiversity module which supports financial institutions to better understand biodiversity-related impacts of their portfolios and we are part of an industry user group working to develop an approach to assess nature-related risks and opportunities relevant to financial institutions.

Further to the work that began in 2020 in relation to identifying biodiversity and ecosystems as a critical area within our PRB pilot impact assessment, we continue to assess any associated impacts within our portfolio.

For further details, see our position statements on the Barclays ESG Resource Hub at: [home.barclays/sustainability/esg-resource-hub/](https://home.barclays/sustainability/esg-resource-hub/)

Further details on our position statements can be found in the non-financial information statement on pages 49 to 50 of the Barclays PLC 2021 Annual Report.

#### Nature-related financing

Biodiversity and nature-related financing present significant opportunities for the financial sector given the large requirement for capital to protect and restore biodiversity and natural ecosystems. Barclays can contribute to meeting this gap through our green and sustainable finance targets. These targets include financing related to biodiversity, such as 'sustainable food, agriculture, forestry, aquaculture and fisheries', in addition to financing that tracks against Sustainable Development Goals (SDG) 14, Life Under Water as well as 15, Life on Land.

Barclays' operational and business travel carbon offsetting strategy includes support for nature-based climate solutions. This includes the purchase of carbon credits from REDD+ (reducing emissions from deforestation and forest degradation) projects and support for an innovative early-stage project by Indigo, which focuses on measurably enhancing soil carbon levels in agricultural land through the promotion of regenerative farming practices. We recognise the importance of the integrity of natural capital, and we aim to ensure any nature based offsets we purchase are issued under high quality standards and certifications and, where possible, have additional environmental and social co-benefits beyond the carbon mechanism.

#### Get Nature Positive

In 2021, Barclays joined Get Nature Positive, an initiative led by the UK Government's Department for Environment, Food and Rural Affairs and the Council for Sustainable Business. Get Nature Positive is a commitment by businesses to advance on their journey towards nature positive action. Through the commitment, businesses agree to continuously enhance their understanding of nature-related business impacts and to identify new opportunities.

Barclays joined other businesses at the 2021 United Nations Climate Change Conference (COP26) for Nature Day to promote the newly launched initiative, and to showcase what the financial sector is doing to protect and preserve nature and biodiversity.

Further details on Get Nature Positive can be found at: [getnaturepositive.com/](https://getnaturepositive.com/)

## Strategy continued

In addition to accounting for our own operations and recognising the critical role of natural systems in combating climate change, Barclays' partnership with the Blue Marine Foundation (BLUE) is helping to support the protection and sustainable management of the global ocean, the planet's largest natural carbon sink.

For further details on Nature-related financing, see our 'Sustainable financing' section on pages 69 to 72 of the Barclays PLC 2021 Annual Report.

For further details on our approach to SDGs, see our GRI additional disclosure in ESG Resource Hub at: [home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/](https://home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/)

For further details on Barclays' approach to environmental impacts in our operations, see the 'Our operational footprint' section on pages 54 to 56 of the Barclays PLC 2021 Annual Report.

### Blue Marine Foundation

Barclays completed the first year of our three-year partnership with the Blue Marine Foundation (BLUE) to support them in delivering their goal of ensuring that at least 30% of the global ocean is effectively protected and the other 70% sustainably managed by 2030.

The first year of the donation has included supporting the establishment of a fully no-take zone nearly the size of France in Ascension Island's waters, securing the protection of 300km<sup>2</sup> of seabed and kelp forests on the south coast of the UK, developing a new online educational platform to communicate the link between ocean health and climate change, and developing thought leadership in conservation finance, blue carbon and oceanic climate change.

Recognising the critical links between the ocean and the issues of climate change and biodiversity loss, this partnership is an example of how collaboration between NGOs and the corporate sector can bring together new opportunities for nature-positive action and seek to make progress against the gap in financing for climate and biodiversity solutions.



Further details on the Blue Marine Foundation can be found at: [bluemarinefoundation.com](https://bluemarinefoundation.com)



# Scenario analysis



## Scenario analysis

Scenario analysis is an important tool in assessing the future implications of potential climate change pathways on an organisation. Barclays has been exploring scenario analysis since 2018.

# Scenario analysis

Scenario analysis forms a key part of Barclays' approach to assessing and quantifying the impact from climate change. We have developed our approach to scenario analysis through detailed quantitative and qualitative risk assessments of particular portfolios and activities. These can include:

- qualitative assessments such as a climate risk stocktake exercise to establish a grassroots baseline assessment for Principal Risk types, for each portfolio and across material entities
- quantitative assessments such as climate specific internal stress testing and the Bank of England Climate Biennial Exploratory Scenario (CBES)
- ad-hoc scenario analysis to support risk analysis and assessment.

The work we have done to date has covered key exposures across the bank's financial risks, including analysis of exposures to elevated climate risk sectors from both a physical and transition risk perspective across Credit, Market and Liquidity risks, and to heightened sovereign and municipal risk across Market Risk and Interest rate risk in the banking book (IRRBB).

During 2020, Barclays undertook a Climate Internal Stress Test on material portfolios using two climate scenarios as an exercise in preparation for the Bank of England's 2021 CBES – details of this can be found in the 2020 TCFD Report <https://home.barclays/content/dam/home-barclays/documents/investor-relations/reports-and-events/annual-reports/2020/Barclays-TCFD-Report-2020.pdf>. During 2021, and to support the CBES exercise, we have significantly enhanced a

number of our models and methodologies used for scenario analysis. Some examples of these are:

- a. We developed a new approach to assessing physical risk, as well as improved transitional modelling for corporate exposures. Coverage has also significantly increased for clients that are assessed at counterparty level, detail of which is included in our Corporate Transition Risk Forecast Model ([home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack](https://home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack))
- b. We included subsidence risk factors, together with flood risk, in our assessment of UK mortgage risk. These risk factors have then been embedded within a forecast for house prices
- c. We developed novel approaches for the largest Commercial Real Estate and Housing Association exposures, leveraging our UK mortgage model by stressing key counterparty financial metrics such as Loan-to-value and Interest Coverage Ratio.

Despite marked improvements from previous exercises, there remains higher uncertainty around the output of these models compared to typical non-climate-related stress tests given the novel and developing nature of climate risks and the long term time horizon of the assessment. A summary of the approaches and assessments we undertook and key themes that emerged from our response to the CBES are covered in the following section.

### Scenarios

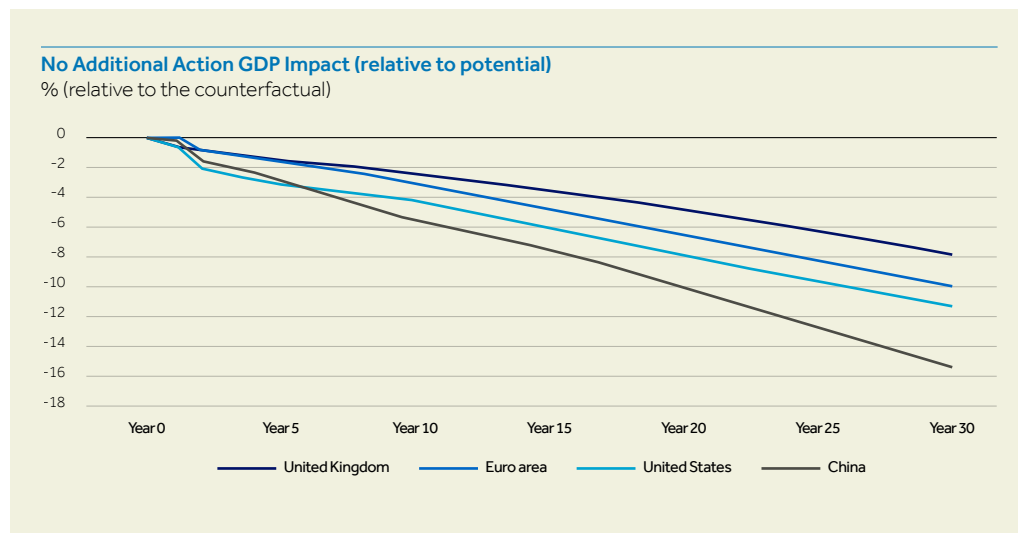
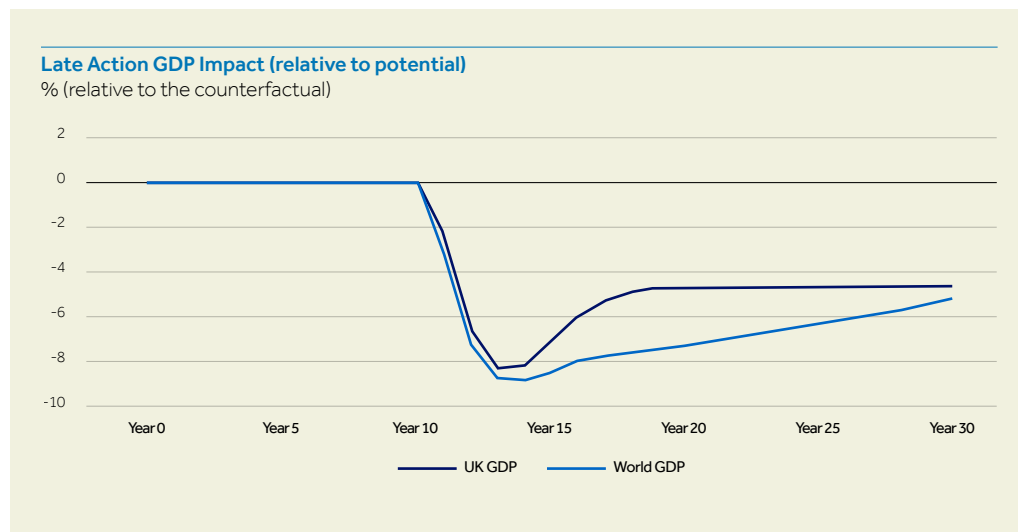
The CBES scenario specification built upon a subset of the Network for Greening the Financial System (NGFS) climate scenarios and expanded on the NGFS scenarios in certain aspects, although they are still consistent across many variables. NGFS climate scenarios aim to provide central banks and supervisors with a common starting point for analysing climate risks under different future pathways. Building upon the NGFS climate

scenarios ensures that the CBES scenarios are grounded in a consistent set of pathways for physical climate change, the energy system, land-use and the wider economy. Specifically, the CBES scenarios take the NGFS Net Zero 2050, Delayed Transition and Current Policies scenarios as a starting point and expanded on these guided by work with climate scientists, academics and industry experts.

CBES Scenario	Early Action (EA):	Late Action (LA):	No Additional Action (NAA):
<b>Description</b>	<p><b>An Early and Orderly Transition</b></p> <p>The transition to a net zero economy starts in 2021. Carbon taxes and other policies intensify relatively gradually over the scenario horizon. Global carbon dioxide emissions are reduced to net zero by around 2050. Global warming is limited to 1.8°C by the end of the scenario (2050) relative to pre-industrial levels.</p>	<p><b>A Late and Disorderly Transition</b></p> <p>The implementation of policies to drive the transition is delayed until 2031 and is then more sudden and disorderly. Global warming is limited to 1.8°C by the end of the scenario (2050) relative to pre-industrial levels. The more compressed nature of the reduction in emissions results in material short-term macroeconomic disruption.</p>	<p><b>Includes only policies in place before 2021</b></p> <p>Primarily explores physical risks from climate change. Here, there are no new climate policies introduced beyond those already implemented. The absence of transition policies leads to a growing concentration of greenhouse gas emissions in the atmosphere and, as a result, global temperature levels continue to increase, reaching 3.3°C relative to pre-industrial levels by the end of the scenario (2080).</p>

# Scenario analysis continued

## Example of CBES Scenario Macroeconomic Impacts:

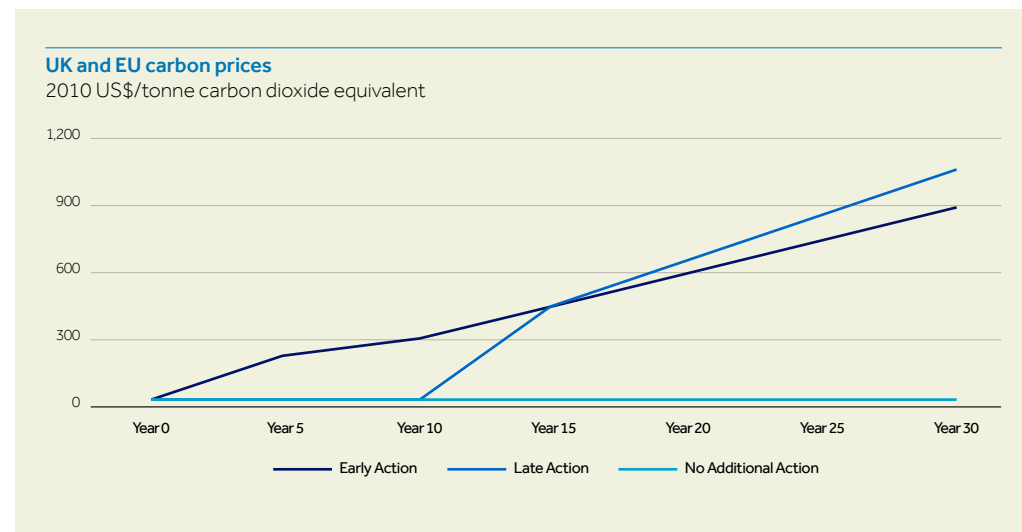


The EA Scenario assumes productivity improvements to compensate for losses in certain sectors due to the increase in carbon prices. Net effects on GDP are minimal.

The LA Scenario assumes a material shock in 2031 due to the abrupt increase in carbon taxes. Peak cumulative impact on GDP is circa -8% relative to the counterfactual (where the 'counterfactual' is a baseline trajectory where no climate impacts impact the

economy). The overall trajectories of LA Scenario between 2031 and 2035 are comparable to traditional BoE stress tests, but with material differentiation between sectors and geographies.

The NAA Scenario is characterised by a long, steady negative impact on growth rates, due to falling productivity, damage to capital and falling trade volumes.



The Bank of England in the CBES uses carbon prices as the main driver of transition risk with a relatively slow and steady increase for the EA Scenario and a more abrupt increase and a higher peak for the LA Scenario. Carbon Prices provide an indication of the level of transition risks in these scenarios. In this context, Carbon Price can be thought of as the overall cost associated with different transition policies from policymakers. In reality, governments may adopt a mix

of policies to reduce greenhouse gas emissions, for example, carbon taxes, cap-and-trade schemes, green subsidies and environmental regulations. As a result, the term Carbon Price is used to refer to a shadow price of all greenhouse gas emissions, i.e. the marginal abatement cost of an incremental tonne of emissions. The higher shadow price of emissions indicates a more stringent transition policy.

## Scenario analysis continued

### Impacts and 2021 Enhancements

The results of our CBES exercise have highlighted risks within our key portfolios to either Physical Risk, Transition Risk or both. We have aggregated results for three main segments of our overall exposures – Wholesale Credit, Mortgages and Cards – where the potential for climate impacts is greatest. The

magnitude of the impact on credit quality for each is shown in the below heatmap, indicating the relative impact of the climate scenario during 5 year windows where the climate risks were greatest, compared to Barclays' 5-year planning horizon. Further detail on our approaches to assessing these portfolios and the insights we have gained are explained below.

	Scenario		
	EA	LA	NAA
Wholesale Credit	Medium	High	Medium
Mortgages	Low	Medium	Medium
Cards	Low	Low	Low

### Transition risk Approach & Insights

#### Wholesale Credit:

We have created an internal counterparty climate risk assessment model to assess the impacts of future climate transition scenarios on certain corporate counterparties of Barclays (the Corporate Transition Risk Forecast Model). This model considers the impact of climate change at a company level including impacts on the counterparty's financial and credit metrics. It also includes specific assumptions and modules for Oil & Gas, Power Utility and Automotive sector assessments, given sector specific dynamics. Further detail of this can be found in our whitepaper at <http://home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack>

For those companies not modelled at this granular counterparty level using the Corporate Transition Risk Forecast Model, we follow an approach that utilises internal stress testing models run using the macroeconomic variables which produces impairment estimates for the population which can be broken into sectors and associated Loan Loss Rates are calculated per sector. Consistency checks are made against our counterparty model and the Bank of England gross value added curves.

Having performed these assessments, we have now gained greater insight into the climate drivers at a sector level.

These are dependent on the climate scenario but can be broadly summarised as follows:

Sector	Transition drivers
<b>Oil &amp; Gas</b>	A structural decline in fossil fuel demand over time will cause Oil & Gas companies, which are unable to transition to low-carbon products, to gradually shrink in size as existing assets are depleted and new developments are no longer brought online. Whilst the sector is highly exposed to transition risk, a key consideration is whether the cash flows of the companies in the sector would be sufficient (while diminishing) to manage their debt load.
<b>Power Utilities</b>	The presence of regulatory support, the starting fossil fuel proportion of generation, and the presence of Transmission & Distribution business, all act as key delineators between those Power Utility players which are positioned to transition as economies decarbonise and those that will face greater challenges. In general, the transition scenarios represent an opportunity for the Power sector given the large increase in electricity demand (driven by renewables), but this trend could mask the risks to unregulated or carbon-intensive utilities, that may not have the earnings capacity to withstand a low-carbon price or the capex to transition.
<b>Automotive</b>	The ability and extent to which Automotive Manufacturing firms increase electric vehicle sales to match increasing consumer preference shifts, will drive changes in the market share they enjoy. Those either further behind currently or with lower ambitions to transition may find market share fall.
<b>Cement/Steel/ Shipping/Aviation</b>	Carbon-intensive sectors which are challenging to abate may be challenged by the introduction of carbon price policies, as a lack of scalable low-carbon technologies lead to high carbon taxes that significantly strain financial performance.
<b>Mining</b>	Within the Mining sector, coal mining represents the majority of sector carbon emissions, as well as representing a commodity that is very sensitive to transition risk. As such, those companies where Coal represents a material portion of operations and commodity mix will face greater challenges within Transition scenarios.
<b>Agriculture</b>	Transition risks arising from shifting consumer preferences, away from meat and dairy and towards more plant based diets, may cause greater challenges to non-arable farmers. Evolving taxation on emissions may impact production methods, supply chain and farm viability

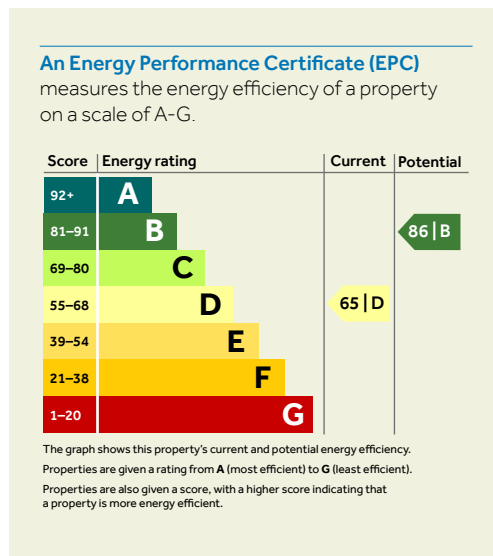
# Scenario analysis continued

## Mortgages:

Transition risks in the Mortgage portfolio are focused on the impacts from energy remediation, driven by regulatory policy to improve the EPC rating of properties. In order to assess this impact, we have considered how this will impact the price of housing, which is consistent with how the Bank of England have considered the transmission channels of these risks.

The Bank of England provide a matrix of the average costs to transition a home from a current EPC rating to a higher rating. These have been used, in combination with figures on average property prices in the UK, to estimate the effective drag on valuation that a worse EPC rated home will face compared to a better EPC rated property. This drag is calculated as the cost of moving from a current EPC to EPC band A, and reflects the possible negative change in valuation that could result for properties if remediation costs were deducted from the valuation by a potential purchaser, based on their current EPC rating.

There will be some properties that cannot be further retrofitted to meet minimum energy efficiency standards (E rating) and these are set to land value and receive the largest stress. Additional requirements were incorporated to factor in the costs of a heat pump, along with subsidies which partially cover the additional retrofitting costs.



Barclays current distribution of exposure across EPC bands, for our UK Residential Mortgage portfolio, is shown above, alongside the distribution should every property be upgraded to its maximum possible EPC.

This analysis is based on data sourced from the government EPC register and covers the portion of the portfolio where an EPC rating can be found<sup>1</sup>. EPC data is available for mortgages amounting to £97.8bn (62% of the UK Mortgage portfolio).

The analysis indicated that whilst Barclays' exposure to properties which cannot upgrade to minimum energy efficiency standards is low (~1%) this particular population causes an oversized portion of the impairment.

@ 31 Dec '21	Current EPC		Potential EPC	
EPC Rating	Balances £m	%	Balances £m	%
A	261.93	0.2	8,689.14	5.5
B	15,922.34	10.1	39,612.17	25.1
C	20,573.07	13.1	35,583.95	22.6
D	37,948.17	24.1	10,167.35	6.5
E	17,881.74	11.3	2,975.40	1.9
F	4,363.62	2.8	608.92	0.4
G	809.54	0.5	123.47	0.1
Missing	59,871.41	37.9	59,871.41	37.9
<b>Total</b>	<b>157,631.81</b>	<b>100.0</b>	<b>157,631.81</b>	<b>100.0</b>

## Cards:

We have assessed the sector of employment and geographic distribution of our credit card customers in the US and Germany, and across our various unsecured consumer lending platforms in the UK (credit cards, lending and overdrafts). We have run the assessment to consider whether our portfolios have a bias towards industries or geographies that could be more exposed to transition risks. If our analysis indicated such a bias existed, we would adjust the economic variables used by our impairment models (typically country-level unemployment rates) to capture how the risks to Barclays portfolios were greater than the wider regional or country-level variables.

Our transition risk assessment for our US Cards portfolio concluded that we likely do not have a bias towards states that are more exposed to transition risks.

## Note

<sup>1</sup> It should be noted that this analysis has been run on the properties that have an EPC. It is not run for properties that don't have one.

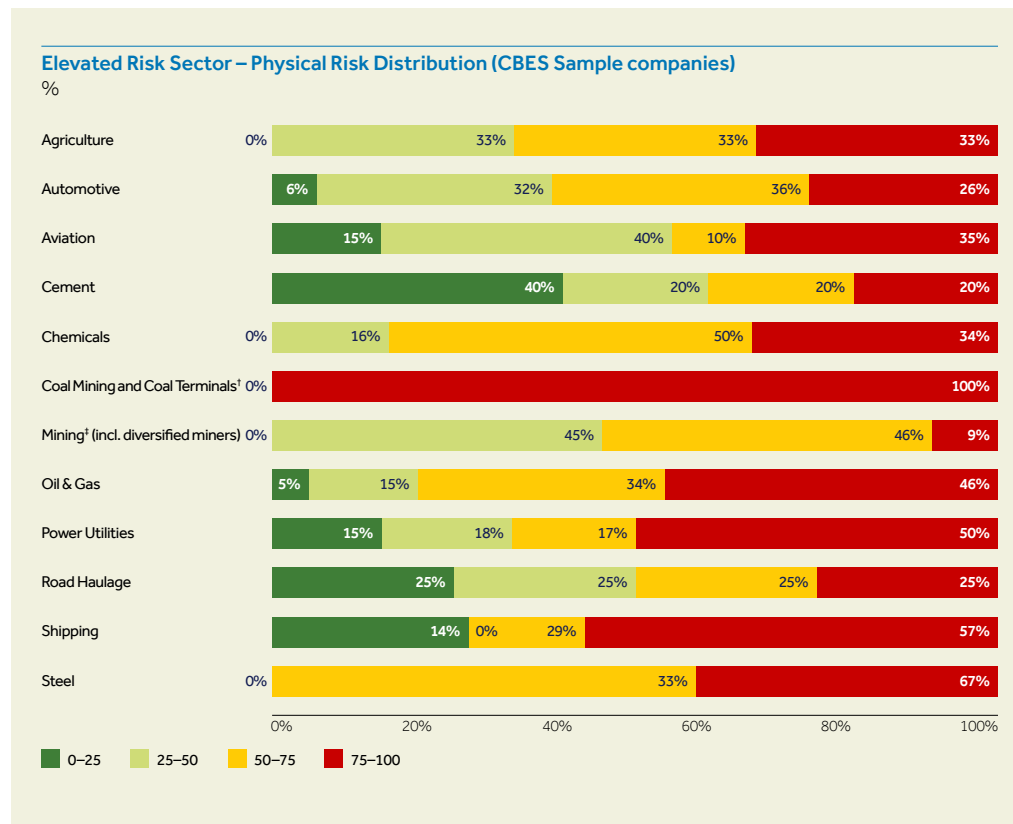
# Scenario analysis continued

## Physical risk approach & insights

### Wholesale Credit Risk:

There are a wide number of transmission channels through which increased physical risk from climate change can impact corporate portfolios. In order to assess our largest and most climate sensitive wholesale corporates to these risks, we have utilised Moodys CreditEdge model and Four TwentySeven's physical risk scores, which cover impacts to companies' operations, supply chains and the markets in which they do business from both a spot and forward perspective. This includes assessments of the impact of a range of climate hazards, including floods, sea level rise, wildfires, hurricanes, heat stress and water stress. The analysis is conducted for each counterparty at an asset level using granular geolocation data. The details of this process are below:

- the model scores companies for physical risk by aggregating site-level climate hazard exposure across all of their known facilities, which can range from manufacturing sites and warehouses to offices and retail stores. The scoring process accounts for the fact that facilities will be affected differently by climate hazards based on their activities. For example, a manufacturing plant that has heavy water and energy inputs will be more sensitive to heat stress and water stress than an office in the same location. Information on a company's facility locations and activities is not public information
- facility scores for each hazard are aggregated up to the associated company and scaled by percentile with respect to the reference universe of companies to derive a hazard risk score for each company between 0 (low risk) and 100 (high risk)
- the analysis from this sample of Barclays' largest and most climate sensitive counterparties has provided an initial view\* on the sectors most at risk from Physical climate hazards. The graph opposite, for elevated risk sectors, highlights the proportion of counterparties across different Moodys Four TwentySeven physical risk buckets.



\*The analysis is based on the sample population of corporates assessed at counterparty level for the CBES exercise and thus coverage differs across sectors. For example, the Agriculture sector includes only a small number of global Agriculture firms and does not include our UK Farming portfolio, which is not currently covered by Moodys 427.

In some instances, the Moodys universe did not include counterparties required for counterparty level modelling. To ensure coverage, a benchmarking approach based on industry and country combination was followed using the country and industry level averages of the entire Moody's 427 universe.

† Coal Mining and Coal Terminals relates to one client predominantly engaged in metallurgical coal mining.

‡ Diversified miners with minority interests in thermal coal mining are included in this category.

## Scenario analysis continued

### Mortgages

For Barclays' UK mortgage portfolio, the most material physical climate hazards were deemed to be flood and subsidence risk. As such, our approach to assessing physical climate risk in this portfolio focused on forecasting how these two physical hazards could change over time, and how these changes would impact Barclays customers. To assist with this assessment, Barclays collaborated with Willis Towers Watson (WTW), to develop a granular climate change impact diagnostic for flood and subsidence, which could be used to derive changes to the valuation of properties driven by increasing risk from these climate hazards. This in turn provides Barclays with a view on both our current exposure to physical risks, but also how this exposure would evolve over a long term horizon due to the effects of climate change.

### Flood

Flooding in the UK is forecast to increase over time and the rate of this increase could accelerate if greenhouse gas emissions are not reduced. The risks from flooding depend on a number of factors, including precipitation levels, the topography of the surrounding land or the presence of nearby bodies of water. These risks can be mitigated through flood defences and other adaptation actions, as well as the availability of insurance coverage. Considering these factors allows for a view on the level of flood risk, which can in turn be incorporated into assessments of the value of properties or the ability of the homeowner to repay the mortgage.

In order to forecast the impact of climate change on flood probabilities, data from the UK Climate Change Exposure Assessment (2017) UK was used. This study includes projections of river peak flow changes for future climate change scenarios, and by utilising the changes in these projections it was possible to approximate the expected change in flood 'return periods' (likelihood of occurrence) across the UK.

The flood exposures of postcodes were then combined with flood data from leading external model providers, who provide a high resolution view of flood risk across the UK. By combining these sources, a hazard rating was produced across the whole of the UK at a postcode sector level. By using these external models, it was also possible to derive a defended and undefended view (i.e. including consideration of flood defenses) over time.

To translate these flood risks into house price impacts, published academic studies have been used which assess the relationship between historic property valuations and flood risks. These studies not only account for the impacts on house price where a property is exposed to flooding directly, but also the impacts from flooding on nearby infrastructure such as roads, which might affect the desirability of the property overall. By using these, a formula which transforms flood risk hazard data to discounts of house prices was developed.

### Subsidence

Subsidence is driven by the interplay of precipitation and temperature factors, which result in volumetric changes to the soil. As such, increased volatility in weather conditions, as a result of climate change, contributes to the acceleration of subsidence impacts. Some areas are more susceptible due to the soil type, for example, London clay. This shrink-swell impact can cause significant localised property level impacts, which can lead to significant impacts to the valuation of a property or associated costs to deal with the effects of subsidence.

To create a granular view of subsidence risk across the UK, data was used from the British Geological Survey (BGS), which shows the potential change in subsidence from changes in climate, combining long-term rainfall and temperature changes with the geotechnical

properties of the ground. This allows identification of areas projected to experience the largest increases in susceptibility to subsidence over the next century.

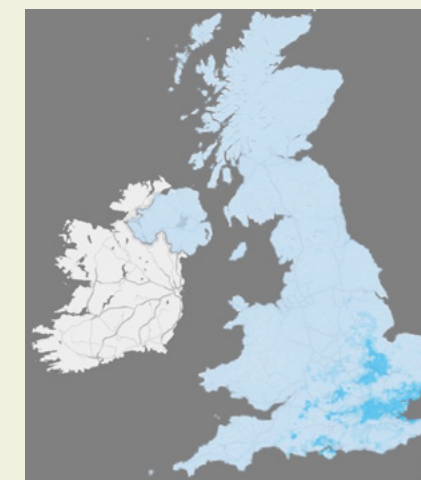
This data was enriched by considering additional information on mining activities and the proportion of older properties within a postcode. Mining activity considerations included factors such as shrink-swell potential, landslide and running sand risks. To ensure that postcodes reflected increased risks at an aggregate level from older properties (themselves more susceptible to subsidence), the distribution of dwellings in a postcode was also considered and the hazard score adjusted where this distribution showed more/fewer older properties.

#### Flood Risk



None Impact High

#### Subsidence Risk



None Impact High

## Scenario analysis continued

At a postcode level, subsidence risk should typically be low compared to flood risk, as the impact is more local rather than regional. When a particular property experiences subsidence, this would impact immediate neighbours but is less likely to impact the whole post code area. However existing studies to calibrate the property discount acknowledge that they suffer from sample selection bias, as houses that experience a serious subsidence event are no longer in the market. These factors have both been factored in when calibrating the formula to transform subsidence risk into property price impacts.

Visual representations of flood and subsidence risk across the UK by 2080, under a RCP8.5 high emissions scenario are shown on the previous page.

Impact on property prices from climate change are expected to occur in the areas flagged as being at high risk of flooding and or subsidence.

These assessments have allowed us to build UK physical hazard maps from which we can calculate an impact on house prices.

While not as severe as flood risk, a greater proportion of Barclays portfolio is exposed to subsidence given the concentration within London and that vast quantities of housing stock are built on clay soil.

### Resilience of our strategy, taking into consideration different climate-related scenarios

At the beginning of this section, we explained that we use scenario analysis to help us assess and quantify potential impacts from climate change. The internal stress tests we have conducted to date and the most recent CBES exercise allowed us to better understand the impacts of climate change on our current balance sheet.

The impact of the climate scenarios we have explored, even over the long term, is more benign than the scenarios we generally use to test the resilience of our business model. Our work to date, using certain scenarios and assumptions, indicates that our business is resilient under all scenarios explored under the CBES.

Nevertheless, we have also begun to explore the impact of our strategic approach to climate change on our business. Overall, the assessment under this CBES exercise suggests that Barclays' strategic plans of managing the emerging climate risks and aligning our financing to the goals of the Paris Agreement in part mitigates some of the risk in at least two of the three scenarios – the Early Action and Late Action scenarios.

The Late Action scenario revealed a higher disruption compared with the Early Action scenario due to the delay in policy incentives which amplified the transition risks faced by our clients. In this scenario, there would be a greater need and opportunity to support our clients to adapt, where they are in sectors most vulnerable to transition risks. However, our strategic plans to transition our portfolio proves to be of benefit under the Early Action scenario and Late Action scenario as such action reduces our risk exposure.

Impacts are likely to be observed in certain businesses in the No Additional Action scenario in which the world will experience heightened physical risks in the longer-term. Without any additional policy support to incentivise the transition, the gap between our ambition to transition to net zero and the carbon reductions observed in the economy would increase. Barclays would need to consider the implications of such divergence and manage increasing exposure to physical risks faced by certain segments of customers and clients we serve.



# Risk management

The processes used by Barclays to identify, assess and manage climate-related risks



# Risk management

Our decision to make climate a Principal Risk reflects our approach to ensuring we are proactively managing climate-related risks across the organisation

In 2020, the Board Risk Committee made the decision that climate risk would become a Principal Risk within the Enterprise Risk Management Framework (ERMF) from 2022. The elevation of climate risk to Principal Risk recognises that it is relevant and material enough to merit establishing a specific bank-wide Framework, in line with other principal risks.

To support this decision, in 2021 the Barclays Group delivered a Climate Risk Integration Plan with three overarching objectives:

- governance framework: develop a Principal Risk Framework and Risk Appetite Statement and integrate climate drivers into limit setting
- scenario analysis: refine methodologies used for the 2020 scenario analysis to support the Bank of England Biennial Exploratory Scenario on climate change, with specific focus on wholesale credit and physical risk modelling
- carbon modelling: enhance the BlueTrack™ model to further develop the approach for the Energy sector, expand coverage to Cement and Metals (Steel) and consider the overall net zero ambition of the Barclays Group\*.

\*Barclays will publish an update to its climate strategy in advance of its 2022 Annual General Meeting including updates on our approach, targets and methodology. This will include 2030 emissions targets for our Cement and Metals (Steel) sectors.

## Climate as a Principal Risk

The elevation of climate risk to Principal Risk included establishment of governance elements, including:

- a Climate Risk Framework that defines climate risk and summarises the approach to identification, measurement, monitoring and reporting of climate risk
- Climate Risk Appetite at Group level established in line with the Group's risk appetite approach and informed by scenario analysis
- a Climate Risk Committee that provides oversight of the Barclays Group Climate Risk profile
- approval for a climate risk control horizontal, to be stood up in 2022.

To inform the establishment of Climate Risk Appetite, two tools were utilised:

- 2021 Stocktake exercise: to establish a baseline assessment by risk type and across entities. This was used to document where climate risk exposure exists and its materiality
- Climate Risk Register: used to inform risk appetite. This includes a breakdown of key risk drivers for physical and transition risks, and materiality ratings using the 2020 climate IST. The Climate Risk Register continues to align with the Group's Risk Register Taxonomy.

Barclays entities, namely Barclays Bank UK (BBUK), Barclays Bank Europe (BBE) and US Intermediate Holding Company, also continued to embed climate risk within their frameworks throughout 2021. Those material entities have dedicated climate leads.

Due to the nature of climate risk our approach will continue to evolve, including consideration of the relative significance of climate risk against other risks

## Climate-related risks

We broadly categorise climate risks into three categories – transition risk, physical risk and connected risk. Within these, we identify a number of factors arising from climate change which we monitor over the short, medium and long term.

### Transition risk

As the world transitions to a low-carbon economy, financial institutions such as the Barclays Bank Group may face significant and rapid developments in stakeholder expectations, policy, law and regulation which could impact the lending activities the Barclays Bank Group undertakes, as well as the risks associated with its other portfolios, and the value of the Barclays Bank Group's financial assets.

As sentiment towards climate change shifts and societal preferences change, the Barclays Bank Group may face greater scrutiny of the type of business it conducts, adverse media coverage, reputational damage and financial and operational risks, which may in turn impact customer demand for the Barclays Bank Group's products, returns on certain business activities and the value of certain assets and trading positions resulting in impairment charges.

### Physical risk

Physical risks from climate change arise from a number of factors and relate to specific weather events and longer-term shifts in the climate. The nature and timing of extreme weather events are uncertain but they are increasing in frequency and their impact on the economy is predicted to be more acute in the future.

The potential impact on the economy includes, but is not limited to, lower GDP growth, higher unemployment and significant changes in asset prices and profitability of industries. Damage to properties and operations of borrowers could impair asset values and the creditworthiness of customers leading to increased default rates, delinquencies, write-offs and impairment charges in the Barclays Bank Group's portfolios. In addition, the Barclays Bank Group's premises and resilience may also suffer physical damage due to weather events leading to increased costs for the Barclays Bank Group.

### Connected risk

In addition, the impacts of physical and transition climate risks can lead to second order connected risks, which have the potential to affect the Barclays Bank Group's retail and wholesale portfolios. The impacts of climate change may increase losses for those sectors sensitive to the effects of physical and transition risks. Any subsequent increase in defaults and rising unemployment could create recessionary pressures, which may lead to wider deterioration in the creditworthiness of the Barclays Bank Group's clients, higher ECLs, and increased charge-offs and defaults among retail customers.

**When considering climate-related risks, Barclays has categorised short, medium and long term to mean the following timescales:**

Short term (S)	Medium term (M)	Long term (L)
0–1 year	1–5 years	5–30 years

# Risk management continued

Climate change, being a unique phenomenon and a driver of risks, may lead to economic and operational impacts and may increase the likelihood or severity of other risks, for example:

- cyclical: amplifying economic cycles, including deeper troughs
- structural: macroeconomic shifts as economies transition to a low-carbon economy, driven by: regulatory tightening; introduction and deepening of carbon pricing mechanisms, including carbon taxes; emission trading schemes and technology evolution; and as the climate system changes
- potential for tail risks and tipping points, for example from chronic physical risks that are not currently clearly understood. This might include impacts from lack of access to clean water, mass human migration due to inhospitable conditions, biodiversity and ecosystem services loss, second order impacts on food chain, or conflict resulting from competition for environmental resources.

## Enterprise Risk Management Framework

The ERMF sets the strategic approach for risk management across the firm by defining standards, objectives and responsibilities for all areas of the Group. The ERMF is complemented by frameworks, policies and standards which are aligned to individual Principal Risks. Risks arising from climate change materialise through various channels: 1) through the financial services and support we provide to customers and clients who may be exposed to the risks of climate change; 2) the operation of our own infrastructure, business and premises which may be exposed to both transition and physical risk; and 3) through reputational risk to Barclays if the company is not seen to be adequately supporting the transition to a low-carbon economy.

Table below sets out how climate risk, in addition to becoming a principal risk from 2022, is integrated across Barclays using the ERMF aligned Climate Risk Framework, Climate Change Financial Risk and Operational Risk Policy (CCFOR) and the Climate Change Standard. These key processes are further described in this section of the report.

Governance		Enterprise Risk Management Framework (ERMF)				
		Climate Risk Framework				
Responsibilities	Climate risk	Climate Change Financial Risk and Operational Risk Policy				Climate Change Standard
		Credit risk	Market risk	Treasury and capital risk	Operational risk	Reputation risk
	<ul style="list-style-type: none"> <li>■ Provide climate horizon scanning information and emerging trends to BRC and Principal Risk Leads.</li> <li>■ Recommend risk appetite statement, constraints and exclusions to BRC.</li> <li>■ Define areas of concern and recommend scenario analysis priorities.</li> <li>■ Lead the development of climate-specific risk methodologies</li> <li>■ Interpret stress test results for relevance as drivers of risk</li> <li>■ Review and challenge risk type approaches and support consistency across risk types</li> <li>■ Aggregate and monitor a central climate risk view across in scope risk types</li> </ul>	<ul style="list-style-type: none"> <li>■ Review individual obligors' exposure using Climate Change Lens.</li> <li>■ Consider Climate Change risk appetite in relevant countries and portfolios.</li> <li>■ Include in the Internal Capital Adequacy Assessment Process (ICAAP).</li> <li>■ Oversight by Retail and Wholesale Risk Management Committees, and Board Risk Committee.</li> </ul>	<ul style="list-style-type: none"> <li>■ Identify and assess climate-related risk factors.</li> <li>■ Apply stress scenarios, assess stress losses and set risk limits.</li> <li>■ Include in ICAAP.</li> <li>■ Oversight by Market Risk Committee and Board Risk Committee.</li> </ul>	<ul style="list-style-type: none"> <li>■ Identify exposure to climate risk.</li> <li>■ Consider key indicators and limits to support risk management.</li> <li>■ Include in ICAAP and Internal Liquidity Adequacy Assessment Process (ILAAP).</li> <li>■ Oversight by Treasury &amp; Capital Risk Committee and Board Risk Committee.</li> </ul>	<ul style="list-style-type: none"> <li>■ Integrate climate change across different risk categories, e.g. Resilience and Premises.</li> <li>■ Include climate change within risk assessment processes including Strategic Risk Assessment.</li> </ul>	<ul style="list-style-type: none"> <li>■ Outline minimum requirements and controls for Reputation Risk management relating to client relationships or transactions.</li> <li>■ Outline the expected business behaviours in relation to these issues.</li> <li>■ Outline the approach to enhanced due diligence.</li> </ul>
Ownership	Climate Risk Accountable Officer	Credit Risk Accountable Officer	Market Risk Accountable Officer	Treasury & Capital Risk Accountable Officer	Operational Risk Accountable Officer	Group Head of Sustainability
	Read more on page 33	Read more on pages 35-37	Read more on pages 37-38	Read more on pages 38-39	Read more on pages 39-40	Read more on pages 40-41

## Risk management continued

### Climate Risk Framework

Our approach to climate risk management is guided by our strategy as well as by the policy and regulatory requirements of the regions in which Barclays and its affiliates operate.

As part of climate risk becoming a Principal Risk the Climate Risk Framework was developed.

The Climate Risk Framework has been defined to support the ERMF and outlines:

- Barclays climate risk definition
- the overall approach for identification and measurement of physical, transition and connected risk variables
- the process for setting risk appetite
- climate risk controls approach, including Risk Assessment process.

Risks resulting from climate change aligned to Model, Conduct, Reputation and Legal Principal Risks are out of the scope of the CRF but are and will continue to be managed under their respective Principal Risk Frameworks. As climate risk continues to evolve, the effect upon these risks may change. Specific consideration of the impact of these changes will be covered as part of these frameworks.

### CCFOR

Recognising that climate change can be a driver to existing Principal risks, the Climate Change Financial Risk and Operational Risk Policy was introduced in 2019. The policy was embedded in each of the Principal Risk Frameworks in the table overleaf and established key principles for identifying and quantifying climate risk, with supporting reporting and governance.

### Climate Change Standard

Our Climate Change Statement sets out our approach to managing the impact of our climate-related activities. We have developed an internal standard to reflect these positions in more detail and, together with other environmentally-related statements and standards, which now determine our approach to climate change and relevant sensitive sectors. These standards sit under the management of reputation risk within the ERMF and are considered through existing transaction origination, review and approval processes.



## Risk management continued

Climate-related risk management process	Credit risk	Market risk	Treasury and capital risk	Operational risk
<i>Frequency of assessment</i>	<i>Annually</i>	<i>Quarterly</i>	<i>Annually</i>	<i>Annually</i>
<b>Time horizons covered</b>	<b>S,M,L</b>	<b>S,M,L</b>	<b>S,M</b>	<b>S,M</b>
<b>Description</b>	The risk of loss to the Group from the failure of clients, customers or counterparties, including sovereigns, to fully honour their obligations to the Group, including the whole and timely payment of principal, interest, collateral and other receivables.	The risk of loss arising from potential adverse changes in the value of the Group's assets and liabilities from fluctuation in market variables including, but not limited to, interest rates, foreign exchange, equity prices, commodity prices, credit spreads, implied volatilities and asset correlations.	Treasury and capital risks are impacted by climate-related risks, primarily in a second order manner and include liquidity risk, capital risk and interest rate risk in the banking book.	The risk of loss to the Group from inadequate or failed processes or systems, human factors or due to external events (for example, extreme weather events) where the root cause is not due to credit or market.
<b>Risk Identification</b>	Identified as part of sovereign, portfolio and obligor credit annual reviews.	Identified by assessing climate-related risk factors across asset classes, sectors and geographies, and aggregating market risk exposures from climate-related risks.	Identified through risk assessment activity across certain industries and asset classes to analyse and assess exposures which may be impacted by climate-related risks.	Confirmed operational risks associated with climate change are included in the Bank's Operational Risk Taxonomy. Climate risk included within the Strategic Risk Assessment process.
<b>Risk Measurement</b>	At Group level measured via scenario analysis and stress testing. At counterparty level measured using a Credit Risk Materiality Matrix completed for obligor/ obligor groups with elevated exposure to climate change risk. Retail portfolios are monitored through regular reporting of climate metrics and are assessed against mandate triggers where appropriate.	Measured by using adverse multi-asset stress scenarios applied to individual risk factors reflecting climate change risks across sectors, countries and regions.	Measured as part of stress testing and key risk indicator monitoring.	Established reporting on internal and external climate-related risk events to the Operational Risk Committee. Risk tolerances for premises and resilience risks are reviewed so these adequately capture climate-related risk drivers.
<b>Example</b>	A client operating in a carbon intensive sector which does not have an adaptation plan to transition to a low-carbon economy and becomes subject to high carbon tax payment that negatively affects its cash flow.	Climate change may lead to market risk through a disorderly transition to a low-carbon economy or via physical climate events and shifts in supply and demand for financial instruments, which may then impact market prices for susceptible sectors or countries.	Adverse market movements resulting from transition risks such as legislative change, or from Government fiscal responses to sudden physical climate change events may impact the Fair Value of the bank's investments such as those in the Liquid Asset Portfolio. Additionally longer term climate change risks may adversely impact the bank's future revenue through customer behaviour, balance sheet or strategy changes over the longer term in response to climate change risk factors.	An extreme weather event occurs which impacts locations and sites where the Group operates could also prevent employees from accessing the premises, and/or results in a data centre failing.

# Risk management continued

## Credit risk

### Definition

The risk of loss to the Group from the failure of clients, customers or counterparties, including sovereigns, to fully honour their obligations to the Group, including the whole and timely payment of principal, interest, collateral and other receivables.

### Climate risk identification

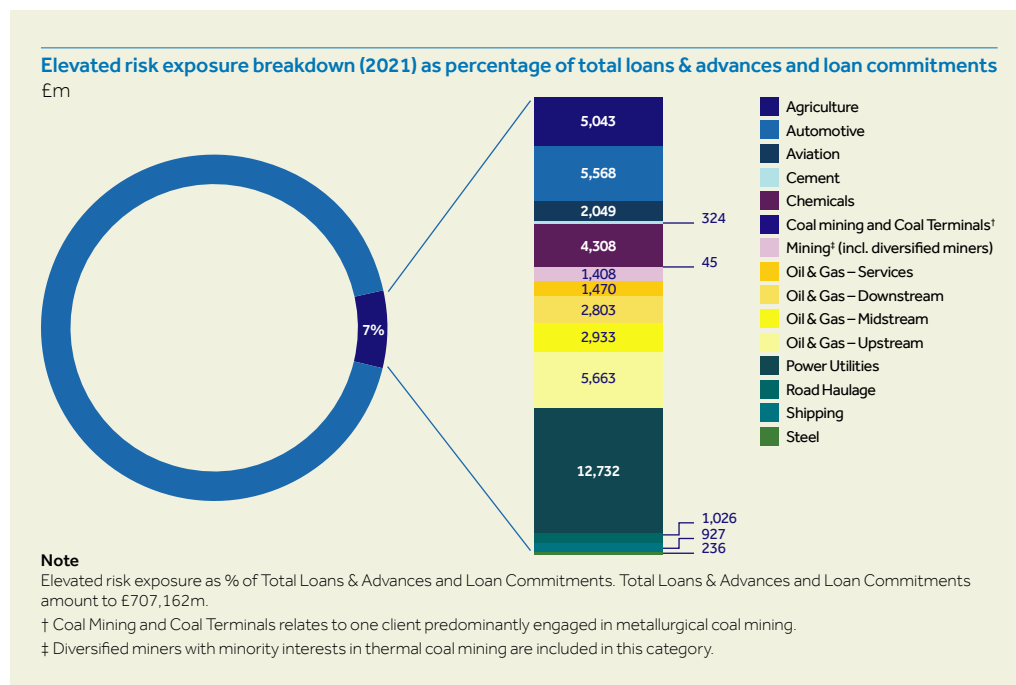
Risk identification is driven by assessing sectors' susceptibility to climate risk. Sectors are categorised into elevated, moderate and low risk. These sectors have been identified through the analysis of Barclays Industrial Classifications by portfolio, informed by results of scenario analysis exercises (see Scenario analysis section on pages 23-29).

To assist determining the level of the potential credit risk arising from climate change for Sovereigns with material exposure, Risk Factors are reviewed, minimum annually.

Across corporate and industrial sectors, elevated risk sectors are those with high exposure to both physical and transition risks of climate change. These are defined in the Climate Change Financial Risk and Operational Risk Policy and apply across the Group. This assessment is updated on an annual basis.

Each climate-related risk in elevated sectors is assessed by risk drivers and impacts. Risk drivers and impacts were designed internally and are based on rating agencies' climate change assessments, recommendations of the TCFD and our involvement in UNEP FI's TCFD Banking Pilot Project Phase II.

Elevated risk sector	Drivers of risk
<b>Aviation</b>	More stringent air emission and carbon regulations, requiring high levels of capital investment and Research & Development (R&D) expenditure.
<b>Automotive</b>	Policy pressure to cut emissions to meet regional emission requirements, requiring high levels of capital investment and R&D expenditure. Phase out of fossil fuel vehicles and introduction of low emission zones in city centres.
<b>Cement</b>	Being one of the hard to abate sectors, policy pressure to cut emissions requires high levels of capital investment and R&D expenditure.
<b>Coal Mining and Coal Terminals†</b>	Reduction in demand of thermal coal, as utilities transition away from fossil fuel. More stringent air emissions, resulting in higher levels of capital investment.
<b>Chemicals</b>	Increasing environmental regulation, including carbon regulations. The increasing efforts to eliminate single-use plastics and improve recycling to prevent marine pollution could also impact demand for products used in plastic manufacture.
<b>Mining‡ (incl. diversified miners)</b>	Rising costs as a result of tighter environmental regulations and increasing water stress.
<b>Oil &amp; Gas</b>	Policy pressure to cut emissions, exposure to carbon taxes and overall increasing environmental regulation of operations and restrictions on access to new resources. Over time, falling demand for fossil fuels.
<b>Power Utilities</b>	Policy pressure to cut emissions, leading to increased capital expenditure costs, plus potential exposure to carbon taxes.
<b>Agriculture</b>	Evolving taxation on emissions may impact production methods, supply chain and farm viability. Reduced demand for meat and dairy as a consequence of shifts in consumer behaviour. Volatile weather conditions and extreme weather events may impact farm credit quality.
<b>Shipping</b>	Policy pressure to cut emissions, requiring higher levels of capital investment.
<b>Steel</b>	Being an energy-intensive sector, the sector is exposed to the policy pressure to cut emissions and evolving air pollution regulation.
<b>Road Haulage</b>	Policy pressure to cut emissions, requiring high levels of capital investment.



## Risk management continued

Whilst UK Mortgages was not initially identified as an elevated risk sector within the Group Climate Change Financial Risk and Operational Risk Policy in 2021, Barclays Bank UK have internally classified the portfolio as having elevated risk.

This was informed by scenario analysis exercises indicating that the portfolio was exposed to both the physical and transition risks of climate change.

### Climate risk assessment Corporate Risk Assessment

In 2019, a Credit Risk Materiality Matrix for climate change, known as a 'Credit Climate Lens', was developed to identify and assess how climate change may impact the Group's wholesale credit risk exposures, against physical and transition risks.

The Credit Climate Lens review is completed for wholesale clients operating in elevated risk sectors with material exposure of more than £5m. It is completed by either Banking or Credit Risk teams across all Barclays entities.

The Lens consists of a set of 20 questions, grouped into themes, that are used to assess the impact of physical and transition risk of the counterparty. Illustrative questions are shown below.

### Credit Climate Lens sample questions

Risk	Focus area	Sample question
Physical	Acute: Frequency and intensity of extreme weather events	What is the exposure of operations and supporting assets to direct damage from extreme weather events?
	Reducing availability of financial protection/insurance	What is the severity of the potential lack of insurance covering business interruptions caused by extreme weather events?
Transition	Regulatory, policy and supervisory change	Does the company have an adaptation plan in place?
	Technology change	What is the likelihood of accelerating contingent liabilities, with alternative technologies displacing existing operations and supporting assets?

Each Lens question has a threshold assigned to it that corresponds to a rating of Low, Moderate or High risk. These are aggregated to provide an overall rating for the client with rationale for the assigned rating, and comments on both physical and transition risks.

In 2021 a Climate Lens review at annual review, origination or other purpose facility was carried out for 240 transactions (2020: 415) in Barclays International. In Barclays UK, 22 clients in elevated risk sectors have been assessed by Relationship Teams using the Credit Climate Lens. In 2021 our review has become more focused with only High and Medium risk submissions being referred to the Climate Risk team hence the decrease in numbers compared to last year.

### Non-Corporate Risk Assessment

To support our scenario analysis modelling, in 2021 we developed risk factor assessments for Municipalities, Financial Institutions and Non-Bank Financial Institutions, building on initial work to develop our Sovereign approach. Each of these portfolios uses a risk matrix approach across tailored physical, transition and connected risk factors. These factors include, for example, the proportion of institution's exposure to sectors exposed to climate risk, reputation risk scores from climate-related issues.

In addition to the risk assessment completed for these areas, scenario analysis and stress testing are used as primary tools to support climate risk assessment and the overall resilience of Barclays' strategy. For more information on stress testing, please see the Scenario Analysis section in this TCFD Report on pages 23-30 and our whitepaper at <http://home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack>.

### Sovereign Risk Assessment

Our assessment of climate risk for sovereigns includes a risk factors matrix incorporating physical, transition and connected risk factors and is part of our ongoing risk identification as part of the CCFOR Policy.

A range of indicators are used to assess a sovereign's ability and capacity to respond to climate-related

challenges, including seven Transition Risk factors, three Physical Risk factors and three Economic & Fiscal Strength factors. A number of external metrics have also been utilised, including the University of Notre Dame's Global Adaptation Index and Climate Change Performance Index – Climate Policy. These factors are then applied to all countries Barclays has exposure to. Sovereigns that are most impacted to these factors are monitored on an ongoing basis.

### Climate risk management

On an annual basis, where an overall Credit Climate Lens rating for a client is assessed as Medium or High, clients are referred to the Climate Risk team. The team conducts enhanced due diligence (EDD)\*. Following their analysis, the Climate Risk team provides recommendations and guidance on how to proceed, addressing any issues identified during the EDD process and the results of EDD are factored into credit decisions. Information and insights gained from the EDD and Credit Climate Lens rating process also inform portfolio review meetings, which itself forms part of the overall risk appetite control framework (see below for detail).

A Climate Risk Dashboard is also presented to Financial and Operational Risk Management Committees and then on to BRC on a quarterly basis, allowing senior management to understand where concentrations are located and to monitor trends across both sectors and regions.

### Portfolio Reviews and Mandate & Scale

Mandate & Scale Exposure Controls are a portfolio risk management tool and form part of the overall risk appetite control framework to review and control business activities, checking they are within Barclays' mandate (i.e. aligned with expectations), and are of an appropriate scale (relative to the risk and reward of the underlying activities). Limits and triggers are put in place to avoid concentrations that may lead to unexpected losses detrimental to the stability of the relevant business or the Group. They take the broader

\*Note that this is a separate EDD process to that which is undertaken to assess environmental and social risks under the Reputational Risk framework (covered on pgs 40-41).

## Risk management continued

economic outlook, wider Group strategy, and risk/return considerations into account and are set for a number of sectors and products.

As a part of the bank’s general approach to portfolio management, Barclays considers macro economic and other drivers and events which may impact on certain sectors or geographies. This includes impacts on the identified climate elevated risk sectors and may lead to action for specific sectors or geographies. For example, in the oil & gas sector, we have considered longer-term impacts from climate transition and physical risks into our assessments and approach to the sector. In keeping with our overall aim to maintain a portfolio with a high credit quality, we take a number of considerations into account for our oil & gas portfolio – including location of assets, the economic profile (profitability) of assets, geopolitical risks, size and resilience of counterparties, and liquidity considerations.

Environmental and climate risks have been integrated into Mandate & Scale annual credit portfolio reviews for elevated risk sectors since 2020.

Physical, transition and connected risks arising from climate change are considered as part of the wider risk management decision process to account for the potential credit risk consequences of climate change on affected portfolios. In 2021, the proposed scope of the climate risk input into the Mandate & Scale credit portfolio reviews was further enhanced to reflect the evolving understanding on low-carbon transition pathways for the sectors and key learnings from climate scenario analysis.

In 2021 Barclays Bank UK introduced a high flood risk mandate to monitor the percentage of properties (stock) in high flood risk areas.

### Market risk

#### Definition

The risk of loss arising from potential adverse changes in the value of the Group’s assets and liabilities from fluctuation in market variables including, but not limited to, interest rates, foreign exchange, equity prices, commodity prices, credit spreads, implied volatilities and asset correlations.

#### Climate risk identification

Climate change may lead to Market risk through a disorderly transition to a low-carbon economy or via physical climate events and shifts in supply and demand for financial instruments, which may then impact market prices for susceptible sectors or countries.

Climate-related risks are determined at a Group level and used in the Market risk identification process.

The table below outlines the climate-related risks, transition and physical, considered for all market risks under each asset class.

#### Climate risk assessment

Market risk arising from climate change is measured by applying a range of stress scenarios, that stress the core risks susceptible to climate change over long and short-term horizons to individual risk factors. A Climate Internal Stress Test (Climate-IST) has been run in 2020 to further enhance understanding of climate risks. Market Risk has performed an assessment of the impact of a disorderly transition to a low-carbon economy on the market risk portfolios across Barclays Group.

In addition to the main Markets portfolios, Cross Markets and Commodities portfolios were also included. This risk assessment was enabled by enhancements in system technology allowing the exploration of Climate Change impact on less-climate risk exposed sectors.

In 2021, Market Risk continued to run such Climate-IST scenarios every quarter, and further enhanced the existing sector/country taxonomy to reflect the climate risk sensitivity. Moreover, although Market Risk was out of scope of the 2021 Bank of England Climate Biennial Exploratory Scenario (CBES), the existing Market Risk scenario analysis has been more closely aligned to the CBES scenarios.

The table below outlines the climate-related risks, transition and physical, considered for all market risks under each asset class.

Asset class	Physical risk		Transition risk
	Country/region impact	Sector impact	Sector impact
Traded credit	<ul style="list-style-type: none"> <li>■ Countries most susceptible to climate changes</li> </ul>	<ul style="list-style-type: none"> <li>■ Sectors reliant on stable weather conditions and power/water supply (e.g. agriculture, soft commodities, tourism, mining, manufacturing, transportation)</li> <li>■ Financial protection – insurance against weather events</li> </ul>	<ul style="list-style-type: none"> <li>■ Carbon-intensive sectors:                             <ul style="list-style-type: none"> <li>– primary producers (e.g. coal miner, oil &amp; gas)</li> <li>– consumers (e.g. petrochemicals, transport)</li> <li>– supply chain (e.g. auto, retailer)</li> </ul> </li> <li>■ Additional cost to meet new regulatory requirements, financial penalties, carbon taxes, green energy subsidies</li> <li>■ Increased capex/cost for primary producers and consumers due to:                             <ul style="list-style-type: none"> <li>– technological/regulatory-driven shifts in consumer demand</li> <li>– tightening efficiency/emissions</li> </ul> </li> <li>■ Increases in cost, impaired quality of goods and speed of delivery due to weaknesses within the supply chain, need for alternative suppliers/products</li> </ul>
Securitised products			
Equities			
Macro (FX, rates, commodities)			

## Risk management continued

### Market Risk Climate Scenario Narrative

- The scenario is designed to explore a disorderly transition to a low-carbon economy until 2050, assuming insufficient progress in climate policy changes until 2030
- In 2030, the climate policy changes are put in place at speed in order to meet the global climate targets by 2050 which causes global macroeconomic shock and adverse market reaction in 2030, followed by markets recovery in 2031 (no other risk-off episodes until 2050):
  - severe and prolonged global recession, elevated risk premium, rise in unemployment and borrowing cost, sharp drop in global demand and in economic activity, housing market slump
  - supply disruptions alongside currency weakness and trade war causes sharp increase in inflation. Central Banks attempt to contain rising prices by hiking the Bank Rate by several percentage points. This causes the usual “safe-havens” such as Treasuries, Gilts or Bonds to sell off along with Equity and Credit markets
  - the scenario is meant to test the bank’s ability to absorb a large shock by combining Transition and Physical risks.

Stress losses arising from this scenario measure and aggregate climate-related risks, and are calculated quarterly.

#### Climate risk management

The pattern of stress losses arising from the stress scenario is used to estimate and set ongoing limits, consistent with the Board-approved maximum stress loss capacity for Market risk, under which Barclays monitors and controls Market risk arising from climate change. These limits are reviewed on an annual basis and must include consideration of potential portfolio impacts arising from climate-related risks.

Furthermore, climate-related Market risk is managed through ongoing monitoring that is reported through the existing risk committee structures so that key risk indicators are monitored and escalated as required.

### Treasury and capital risk (TCR)

#### Definition

This comprises:

Capital risk: the risk that the Group has an insufficient level or composition of capital to support its normal business activities and to meet its regulatory capital requirements under normal operating environments or stressed conditions (both actual and as defined for internal planning or regulatory testing purposes). This also includes the risk from the Group’s pension plans

Liquidity risk: the risk that the Group is unable to meet its contractual or contingent obligations or that it does not have the appropriate amount, tenor and composition of funding and liquidity to support its assets.

Interest rate risk in the banking book (IRRBB): the risk that the Group is exposed to capital or income volatility because of a mismatch between the interest rate exposures of its (non-traded) assets and liabilities.

#### Climate risk identification and assessment

The TCR function has focused on building awareness of how the areas within our risk oversight may be impacted by physical, transition and connected risks, and calibration of key indicators for regular reporting and monitoring. The function has continued to build upon our understanding of climate risks, including through Barclays’ participation in the 2021 CBES and adding of climate risk elements to the IST 2021. Analysis to date highlights the following:

#### Capital risk:

- Barclays’ capital position is indirectly subject to climate risk through Group-wide exposures across all risk types. The TCR function oversees the bank’s capital management activities and planning, and will use the output of Group-wide climate stress tests to inform our understanding of how capital management may be impacted.

#### Liquidity risk:

- Barclays proactively reviews its approach to managing funding and liquidity risks that may arise as a result of certain physical risks such as extreme weather events, or transition risks such as a move to a low-carbon economy. A risk assessment has been performed during 2021 to explore the potential vulnerabilities to certain industries and asset classes that may be subject to a lack of available liquidity under a climate stress scenario.

#### Interest rate risk in the banking book and Pension risk:

- Fair value positions such as those within the Liquid Asset Buffer are exposed to general market conditions which could deteriorate under longer term climate stress. Physical or transition risks may lead to government fiscal responses that would impact market volatility. Our long-term investment strategy may be subject to change in light of these climate pressures, therefore we completed an assessment focusing on the impact of potential credit downgrades of current investments in different climate change scenarios, on their eligibility in the Liquid Asset Buffer. We also enhanced stress calculations with additional stress applied on Sovereigns, Supranationals and Agencies (SSA) issuers that are particularly vulnerable to climate change.
- Pension exposures are subject to climate stresses impacting market conditions. Pension holdings are primarily affected by interest rates, inflation and credit spreads which may be impacted by longer term climate change effects. To identify key areas of focus pension scheme assets have been categorised based on their country and industry risk through the lens of climate change.
- Principal Investments (PI) – equity positions held by Barclays – are most likely to be impacted by stresses to energy markets and carbon transition changes. The future investment strategy of the team and long-term revenue of these investments may be influenced by changing climate and legislative conditions. In line with Barclays’ strategy PI has continued to increase exposure to new initiatives and companies that meet ESG criteria and contribute to a smoother transition to a low-carbon economy. At the same time the divestment of legacy natural resource investments has accelerated and total exposure to the Oil & Gas sector has significantly decreased.



## Risk management continued

- Accrual Banking Book Net Interest Income may be moderately impacted by climate change. In addition to general interest rate movements, transition risks such as future changes to legislation, commitments to meeting carbon targets or reputational considerations may impact future deposit levels, pricing and longer-term interest rate risk management strategies. There may also be impacts from physical risks such as flooding or drought potentially impacting the composition and performance of our asset portfolios including asset prepayment rates, new volumes, pricing and interest rate risk management of those portfolios. In 2021, we completed an assessment focusing on the economic impact of potential forced unwind of structural hedges on the deposit base as a result of significant outflows triggered by concerns about Barclays' climate change credentials.

### Climate risk management

TCR is in the formative stages of understanding, identifying and measuring climate risk, therefore the incorporation of climate risk into the TCR risk limit framework is an evolving process and does not have a mature, systematic approach. TCR will continue to undertake annual reviews to identify exposures in our oversight that are impacted by physical, transition and connected risks arising from climate change. This will inform the setting of relevant key indicators and risk limits, which will be overseen by the Treasury and Capital Risk Committee on a quarterly basis.

Barclays' assessment of capital requirements factors in climate considerations as part of Barclays annual ICAAP submission.

### Operational risk

#### Definition

The risk of loss to the Group from inadequate or failed processes or systems, human factors or due to external events (for example, extreme weather events) where the root cause is not due to credit or market risks.

#### Climate risk identification

From a climate risk perspective, Barclays is exposed to climate change risks in its operations, either directly or via the operations of its suppliers. This exposure is predominantly related to physical risks such as extreme weather events (e.g. cyclones, hurricanes and floods), along with longer-term changes in weather patterns (e.g. increased mean temperatures, sea levels, changing rain patterns, water stress/scarcity or drought conditions).

The Operational Risk Framework includes risks that are associated with Climate Change as well as the activities required to identify, measure and manage these risks as part of the operational risk profile. Operational Risk maintains a taxonomy of operational risks on behalf of the Group, which includes the operational risks across Principal Risks (e.g. Conduct risk, Legal risk, Model risk) as well as operational failures associated with the financial Principal Risks (Credit, Market, Treasury and Capital). The Operational Risk Taxonomy is managed and governed in accordance with the Operational Risk Taxonomy Standard that forms part of the Operational Risk Framework. This framework is reviewed and updated, where appropriate, on an annual basis. As physical risk events related to extreme weather events could impact Barclays' operational capabilities, climate change is already integrated into the Operational Risk Framework, with relevant existing risks being in scope of climate change. The risks categories most likely to be impacted by physical risks are Premises risk and Operational Recovery Planning:

- Premises risk ensures that operational risk requirements are understood, monitored and mitigated appropriately, and are managed to ensure compliance with relevant legal and regulatory requirements, including any required authorisations, permissions and licenses. Premises risk is managed under the Group Property Policy and Standards, which outline Barclays' approach to addressing environmental risks with respect to the availability of operational premises. This Policy defines a low tolerance threshold for premises unavailability which covers the risk of the physical impacts of climate change, and aims to ensure that Barclays' premises do not become unavailable and/or do not affect at least one Barclays product/service for a sustained period of time. Additionally, any potential strategic site's exposure to extreme weather events is considered.
- Operational Recovery Planning ensures that Barclays is able to recover business services. Operational Recovery Planning determines business requirements in maintaining services and responding to business disruption, which could be caused by climate change. Barclays maintains and annually reviews global operational recovery plans and capabilities. Barclays has adopted a non-cause/non-scenario scalable operational recovery planning approach, with capabilities and infrastructure which are designed to mitigate business disruption without specific consideration to climate change.

### Climate risk assessment

Operational Risk continues to identify, manage and measure climate risk as part of the existing operational risk profile through its business as usual activities. These activities include working with Premises and Operational Recovery Planning Horizontal Owners to identify and respond to any new emerging climate risk related impacts or regulatory requirements, and consideration of changes to approach or taxonomy in line with regulatory requirements. We continue to explore different approaches to provide a quantification assessment, albeit challenges for quantification relating to the lack of appropriately granular, business-relevant data and tools remain. Quantifying operational risk through existing structured scenarios would allow us to better examine and size the potential incremental impact arising from climate risks. However, the challenge of determining scenarios that are business orientated, sourcing available and relevant information to support the effort, and connecting the given scenario to the idiosyncrasies of operational risk will require further consideration.

Additionally, Barclays has a set of structured scenarios at Group level, for which Operational Risk coordinates the process. These scenarios map to the operational risk and conduct risk taxonomies and cover a range of risks where climate implications could be an incremental factor.

### Climate risk management

The Group Property Standard outlines Barclays' approach to addressing environmental risks with respect to the availability of operational premises. Additionally, exposure to extreme weather events is considered during the design or refurbishment of new and existing strategic sites.

## Risk management continued

The Operational Recovery Planning requirements outline Barclays' requirements to anticipate, prevent, adapt, respond to, recover and learn from internal or external disruption. Our focus is on continuing to deliver important business services to customers and clients, and minimise any impact on the wider financial system, in the event of operational disruption. The Operational Recovery Planning risk from climate change is expected to manifest through premises and supplier risk in the first instance, and if this leads to operational disruption, our operational recovery planning framework would help mitigate the impacts through invocation of crisis management, and response and recovery plans. Our approach to Operational Recovery Planning evolves in response to the changing threat landscape, and this will include consideration of climate change and its associated impacts.

Barclays deploys and validates appropriate recovery strategies for its critical processes, including the ability to transfer processing to alternative locations or premises. For our third party service providers, Operational Recovery Planning requirements are articulated through our Supplier Control Obligations (SCOs). Each third party service provider is required to attest to their compliance with the SCOs on an annual basis and further assurance is undertaken on a risk-based approach.

Management, reporting and oversight is in place to monitor internal and external risk events that may be attributable to Climate Change. Operational Risk continues to identify, manage and measure Climate Change risks as part of the existing operational risk profile through business as usual activities.

This includes working with Premises and Operational Recovery Planning Horizontal Owners to identify and respond to any new emerging Climate Change related impacts or regulatory requirements, and consideration of changes to approach or taxonomy in line with regulatory requirements.

### Reputation risk

#### Definition

A reduction of trust in the Group's integrity and competence may reduce the attractiveness of the Group to stakeholders and could lead to negative publicity, loss of revenue, regulatory or legislative action, loss of existing and potential client business, reduced workforce morale and difficulties in recruiting talent. Ultimately it may destroy shareholder value. Barclays is linked to clients across a wide range of sectors and geographies, including those that have the potential to cause or contribute to significant adverse impacts on the climate.

We recognise that we have a responsibility to proactively identify and address the adverse impacts that we may be linked to through our provision of financial services to these clients. Our assessment of environmental and social risks not only helps safeguard our reputation, ensuring longevity of the business but also enhances our ability to serve our clients and support them in improving their own sustainability practices and disclosures.

#### Climate risk identification

Environmental and social risks are governed and managed through our Enterprise Risk Management Framework (ERMF), setting our strategic approach for risk management by defining standards, objectives and responsibilities for all areas of Barclays. The ERMF is complemented by a number of other frameworks, policies and standards, all of which are aligned to individual Principal Risks.

#### Position and Policy statements on sensitive sectors

##### Climate Change

- Coal mining
- Coal power
- Oil sands
- Fracking
- Arctic oil and gas

##### Forestry and Agricultural Commodities

- Forestry, pulp and paper
- Palm oil
- Soy



<https://home.barclays/sustainability/esg-resource-hub/statements-and-policy-positions/>

### Climate risk assessment

Our assessment of environmental and social risks not only helps safeguard our reputation, ensuring longevity of the business but also enhances our ability to serve our clients and support them in improving their own sustainability practices and disclosures.

Our Climate Change Statement sets out our approach to managing the impact of our climate-related activities. We also have a Forestry & Agricultural Commodities Statement which has relevance for climate change. We have developed internal standards to reflect these positions in more detail. These standards sit under the management of Reputation Risk in the ERMF.

These standards determine our approach to climate change and relevant sensitive sectors and are considered as part of our existing transaction origination, review and approval process.

#### Enhanced Due Diligence

We have an enhanced due diligence approach for certain clients, including clients operating in energy sub-sectors covered by our Climate Change Statement. This includes all clients involved in thermal coal, oil sands, and hydraulic fracturing (commonly referred to as fracking).

All in-scope clients in these sub-sectors must be assessed annually via a detailed due diligence questionnaire, which is used to evaluate their performance on a range of environmental and social issues, and may be supplemented by a review of client policies/procedures, further client engagement and adverse media checks as appropriate. This annual review generates an Environmental & Social Impact (ESI) risk rating (low, medium, high), which in turn determines whether further review and client engagement may be required throughout the year.

## Risk management continued

For clients with a medium or high ESI rating further risk assessment is undertaken prior to execution of individual transactions with those clients. This enhanced due diligence approach and the consideration of wider environmental and social risks has been extended to clients in-scope of our Forestry & Agricultural Commodities standard.

For clients in-scope of our other standards, in particular the Forestry & Agricultural Commodities standard, we take a similar approach and work with clients on areas that may pose a heightened environmental and social risk before deciding whether to proceed or continue a relationship. This year we augmented our due diligence approach for these clients by developing a detailed due diligence questionnaire against which we review these clients on an annual basis.

Clients engaged in forestry, palm oil or soy production are assessed for compliance with the requirements in our Forestry and Agricultural Commodities Statement and a number of other environmental and social issues – such as their zero deforestation commitments, sustainability certification coverage, and their adherence to the principles of Free, Prior and Informed Consent (FPIC) – to better understand how they are managing their material environmental and social impacts.

In recognition of the growing concerns around the impact of soy and beef supply chains on deforestation and land conservation in South America, this year we have supplemented our enhanced due diligence reviews of relevant agribusiness clients to include client engagement calls specifically focused on this topic.

We have used these calls as an opportunity to gain a more detailed understanding of the risks and challenges in the region and better understand these clients' ongoing supplier traceability and monitoring activities. This engagement should allow us to better support these clients in addressing their supply chain deforestation risks and to encourage the improvement of these activities over time where together we have identified opportunities to do so.

### Climate risk management Escalation and decision

Where client relationships or transactions have a high or medium ESI risk rating following an enhanced due diligence review, they are then escalated to the appropriate business unit review committee for consideration and, in relation to execution of a transaction with those clients, a decision on whether to proceed. Should the front office business team, the Sustainability and ESG team and/or Climate Risk team believe the issues are sufficiently material, these would be escalated to the CTRC or Group Reputation Risk Committee, as appropriate, for more senior consideration and decision. Both of these Committees include representation from the Group Executive Committee.

CTRC may make the following determinations:

- a) approve the transaction or relationship
- b) reject the transaction or relationship
- c) approve the transaction or relationship, subject to prescribed modifications, or
- d) escalate the review of the transaction or relationship to the Barclays Group CEO.

### Monitoring

As part of our management of environmental and social risks, we may require further client engagement calls in relation to the specific environmental and social risks that we have identified as part of our enhanced due diligence process. We have used these calls as an opportunity to gain a more detailed understanding of the risks and challenges that the client is facing and to better understand any path to transition they may have.

We are continuing to work with clients in key sectors, believing it is better to be engaging with clients in relation to the transition, rather than simply walking away from financing for individual companies. We recognise there may be companies or particular activities that cannot transition over time, and in such cases we believe those clients will find it increasingly difficult to access markets for financing, including through Barclays.

# Metrics and targets

The metrics and targets used to assess and manage relevant climate-related risks and opportunities

## Metrics and targets

<i>Recommendation</i>	<i>Our metrics/targets</i>	<i>Page No.</i>
<b>Our metrics used to assess climate-related risks and opportunities in line with our strategy and risk management process</b>	1. Operational Footprint <ul style="list-style-type: none"> <li>■ Group Metrics               <ul style="list-style-type: none"> <li>– Total GHG emissions by scope 1, 2 &amp; 3 business travel (market and location based)</li> <li>– Energy consumption</li> <li>– GHG emissions intensity (tonnes of CO<sub>2</sub>e/full time employee/m<sup>2</sup>)</li> </ul> </li> <li>■ Campus Metrics               <ul style="list-style-type: none"> <li>– Onsite renewable sources</li> <li>– Energy intensity</li> <li>– Water efficiency</li> <li>– Waste diverted</li> </ul> </li> </ul>	45
	2. Reducing our financed emissions <ul style="list-style-type: none"> <li>■ Energy absolute emissions MtCO<sub>2</sub></li> <li>■ Power emissions intensity KgCO<sub>2</sub>/MWh</li> <li>■ Fuel mix – Energy (%)</li> <li>■ Fuel mix – Power (%)</li> <li>■ Breakdown of Energy CO<sub>2</sub> emissions attributed to forms of financing</li> </ul>	47, 48
	3. Financing the transition <ul style="list-style-type: none"> <li>■ Green Financing £bn</li> <li>■ Green Financing facilitated £bn</li> <li>■ Investment in green innovation</li> </ul>	49, 50
	4. Climate Risks <ul style="list-style-type: none"> <li>■ Climate-related assets</li> <li>■ Elevated risk Sectors</li> </ul>	51
	5. Capital markets financing	52
<b>Our Scope 1, Scope 2 and Scope 3 greenhouse gas (GHG) emissions</b>	<ul style="list-style-type: none"> <li>■ Total GHG emissions by scope 1, 2 &amp; 3 business travel (market and location based)</li> <li>■ (Scope 3) Energy absolute carbon emissions MtCO<sub>2</sub></li> <li>■ (Scope 3) Power carbon emissions intensity KgCO<sub>2</sub>/MWh</li> </ul>	45, 48
<b>Our performance against targets</b>	<ol style="list-style-type: none"> <li>1. Operational footprint</li> <li>2. Aligning our portfolios and reducing financed emissions</li> <li>3. Financing the transition</li> </ol>	45, 48, 50

## Metrics and targets continued

We have developed key metrics and targets to track progress against our climate strategy.

We have developed metrics and targets to track progress against our climate strategy. In developing our metrics and targets we continue to develop our methodology, including adding granularity and updating external client and industry data as these become available over time. These metrics and targets are used to measure and manage our climate-related risks and opportunities. We summarise progress against our existing set of targets aligned to our climate strategy: achieving net zero operations; reducing our financed emissions (as shown using our BlueTrack™ methodology); and financing the transition.

### Alignment to 2017 TCFD Annex Recommendations

Recognising the need for industry alignment on metrics and targets, we have sought to align our core indicators to the 2017 TCFD Annex recommendations.

Within our operational metrics and targets, page 45, we include scope 1 and scope 2 greenhouse gas emissions as well as our scope 3 business travel emissions, these have been calculated following the GHG Protocol guidelines. Efficiency ratios and historical trends are also disclosed. Our metrics include energy, water and waste as these are the most appropriate and applicable to our business.

In our climate risk metrics, page 51, we disclose total loans and advances at amortised cost and total loan commitments of elevated climate risk sectors. This metric is used to assess the impact of transition and physical climate-related risks on our lending. The approach to defining elevated risk sectors is detailed in the Risk Management section on page 35. These metrics are broken down by industry sector as the most appropriate and relevant to our risk management approach.

We have provided the amount and percentage of carbon-related assets relative to total assets taking the definition of carbon-related assets from the 2021 TCFD Annex.

The 2021 TCFD Annex Recommendations also include guidance on disclosing the extent to which our lending and financial activity is aligned with a well below 2-degree scenario. Our BlueTrack™ dashboard currently measures our financed emissions in the Energy and Power sectors (details on how these metrics are calculated can be found at <http://home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack>).

We have also set targets against these two metrics and will be extending the coverage of BlueTrack™ and setting targets for a number of high emitting sectors by 2024.

We have disclosed the amount of lending and other financing connected with climate-related opportunities within our financing the transition section, pages 49-50.

Details of our climate-related remuneration components are included in the Governance section as they relate to executive management pay. Details can be found on page 8.

A carbon price forms a key variable within our scenario analysis and details can be found on page 24.

## 1. Achieving net zero operations

### Decarbonising our operations

In 2019, we joined the global corporate renewable energy initiative, RE100 with a commitment to source 100% renewable electricity for our global property portfolio by 2030, with an interim goal of 90% by 2021.

In 2021, we met our target with 94%<sup>Δ</sup> of the electricity used across our global property portfolio coming from renewable sources. This transition to renewable sources of energy contributed to Barclays exceeding its target of 80% GHG emissions reduction for scope 1 and scope 2 (market based) emissions by achieving an 86%<sup>Δ</sup> reduction in 2021. Over the coming years, in addition to using green tariff<sup>1</sup> and energy attributes certificates<sup>2</sup> to achieve our RE100 commitment, we aim to sign Power Purchase Agreements<sup>3</sup> and increase on-site renewable energy generation. We intend to generate 10% of our key campuses total operational energy from on-site renewables by 2035. For example, we have installed a solar panel power plant in our Pune campus that has reduced our emissions by 80tCO<sub>2</sub>e from February to September 2021 and we are building a Sustainability Centre in our Glasgow campus that will provide self-generated solar energy for our Glasgow campus.

At the same time as continuing our transition to renewable electricity, we intend to decarbonise our global property portfolio by progressively eliminating the use of fossil fuels currently used to heat and cool our buildings. We will continue removing the use of natural gas in our buildings, replacing gas boilers with carbon-free heating technologies when feasible. We will also continue to embed circular economy principles to reduce waste in our buildings and support the regeneration of natural systems.

### Improving the energy efficiency of our operations

In 2021, we launched an Energy Optimisation Programme to help improve the energy efficiency of our global property portfolio. The programme aims to improve our building management system (BMS) controls, including our use of air conditioning units and energy efficient technologies such as LED lighting, as well as our ability to adjust to changing occupancy requirements and weather conditions. To align with the UK Green Building Council net zero building pathway recommendations, we intend to achieve a 70% energy intensity reduction across our key campuses by 2035.

#### Note

- 1 Green tariffs are programmes in regulated electricity markets offered by utilities that allow large commercial and industrial customers to buy bundled renewable electricity from a specific project through a special utility tariff rate.
- 2 EAC is the official documentation to prove renewable energy consumption. Each EAC represents proof that 1 MWh of renewable energy has been produced and added to the grid. Global EAC standards for renewable claims are primarily Guarantees of Origin in Europe, RECs in North America and International RECs (I-RECs) in a growing number of countries in Asia, Africa, the Middle East and Latin America.
- 3 A Power Purchase Agreement (PPA) for renewable electricity is generally defined as a contract for the purchase of power and associated renewable energy credits (RECs) from a specific renewable energy generator (the seller) to a purchaser of renewable electricity (the buyer).

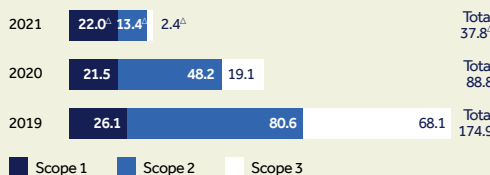
Δ 2021 data reproduced from the Barclays PLC Annual Report subject to independent Limited Assurance under ISAE(UK)3000 and ISAE3410. Refer to the ESG resource hub for details: [home.barclays/sustainability/esg-resource-hub/](http://home.barclays/sustainability/esg-resource-hub/)

# Metrics and targets continued

## Operational footprint dashboard

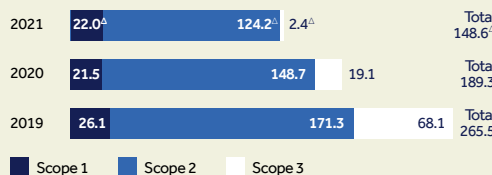
### Total GHG emissions by scope (market based)

'000 tonnes CO<sub>2</sub>e

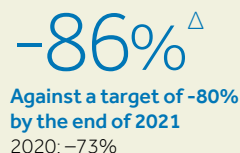


### Total GHG emissions by scope (location based)

'000 tonnes CO<sub>2</sub>e



### Scope 1 and 2 (marked based) GHG emission reductions (against a 2018 baseline)



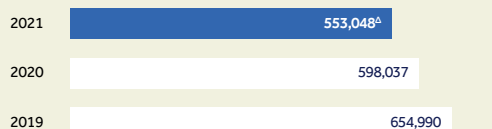
### GHG emissions intensity (market based)

tonnes CO<sub>2</sub>e / FTE

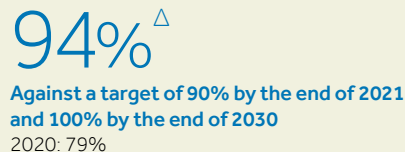


### Total energy use

GWh



### Progress against Barclays' commitment to RE100



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## Campus sustainability measures

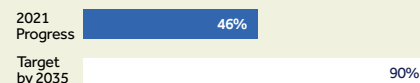
### On-site renewable electricity generation



### Energy intensity reduction (kWh/m<sup>2</sup>) (against a 2019 baseline)



### Waste diverted



### Improve water efficiency



### Notes

- Emission reductions and intensities have been reported using the market based methodology.
- The reporting year for our GHG emissions is 1 October to 30 September. The methodology used for emissions calculation is the WRI/WBCSD Greenhouse Gas (GHG) Protocol. We have adopted the operational control approach on reporting boundaries. For more information, see the Barclays ESG Reporting Framework 2021 on our ESG Resource Hub.
- For 2021, we have applied the latest emission factors available at the time of reporting. We continuously review and update our performance data based on updated carbon emission factors, improvements in data quality and updates to estimates previously applied. We have recalculated this information from our previous 2020 reporting year. Where the recalculation of our performance using updated carbon emissions factors and improvements in data quality and estimates has resulted in a change of more than 5% we have represented these figures in the table above. In 2021, we conducted a review of our GHG emissions inventory for Scope 1 and Scope 2 to improve the transparency of our public emissions disclosure. Historically, Barclays have chosen to account for third party managed data centres under Scope 1 and Scope 2. Based on our review, and with due regard to the GHG Protocol Guidelines and Operational Control definitions, we have updated our GHG accounting policy and reallocated the emissions of third party managed data centres under Scope 3 'downstream leased assets', which will be reported in future. This reallocation is reflective of our limited control over energy sources at third party managed data centres. We have therefore re-baselined our historic emissions for 2018 and updated our reported figures for subsequent years. The previously reported Scope 2 (location based) emissions were: 2018 (203,100 tCO<sub>2</sub>e), 2019 (182,000 tCO<sub>2</sub>e) and 2020 (159,500 tCO<sub>2</sub>e). In addition, a correction to underlying fugitive consumption data was identified, which has resulted in an adjustment to 2018-2020 fugitives emissions. The previously reported Scope 1 emissions were: 2018 (25,900 tCO<sub>2</sub>e), 2019 (23,800 tCO<sub>2</sub>e) and 2020 (18,800 tCO<sub>2</sub>e).

## Metrics and targets continued

### Making our operations more environmentally sustainable

We continue to work to ensure our facilities consume fewer resources, maximise the reuse of our materials and improve indoor environmental quality.

In 2021, we produced 4,014 tonnes of waste across our key sites; while this is a 76% reduction in comparison to 2018; we recognise that we need to do more. The reduction in waste was largely driven by our new hybrid working model accelerated by the COVID-19 pandemic and the investment in our digital capabilities. For example, we reduced the volume of purchased paper by 91% compared to 2018.

Our ambition is to achieve and maintain TRUE (Total Resource Use and Efficiency) zero waste certified projects across our key campuses by 2035, which means we must divert a minimum of 90% of solid, non-hazardous wastes from the environment, landfill, incineration (waste-to-energy) to recycling facilities or locations where the waste can be reused.

To support our waste reduction strategy, our Glasgow campus has already partnered with Soulriders to redistribute surplus food to local charities and started to replace single use items with reusable items and repurposed the onsite compost for our landscaping needs.

We continue to work to improve the efficiency of our water consumption across our key campuses by investing in water saving infrastructure. For example, Pune was our first campus to have a fully integrated rainwater harvesting system to store and repurpose 50,000 litres of rainwater.

To support our efforts to design and operate sustainable buildings, we aim to follow sustainability best practices, including the US Green Building Council's Leadership in Energy and Environmental Design (LEED) certification programme and international green building standards, such as Building Research Establishment Environmental Assessment Method (BREEAM), National Australian Built Environment Rating System (NABERS) and GreenMark. In 2021, 45% of our global property portfolio had green building certifications, and 35% of our buildings remain certified to ISO 14001, the international standard for designing and implementing an Environmental Management System (EMS). Our ambition is to roll out ISO 14001 certifications across our key campuses by 2025.

### Minimising our travel emissions

Even though employee travel is a relatively small source of our carbon emissions, we intend to minimise travel emissions where we can. We do this by leveraging digital technology where possible as an alternative to face-to-face meetings, adjusting our travel policy to promote low-carbon solutions and avoid non-essential business trips and using our booking and reporting platforms to improve colleagues' awareness of their individual carbon footprint.

In 2021, total colleague air travel emissions were 1,797 tCO<sub>2</sub>e, with a 97% reduction against a 2018 baseline, accelerated by travel restrictions arising from the COVID-19 pandemic. As we move to more normalised business travel levels after the pandemic, we recognise we may see an increase in travel emissions in future years. All emissions related to our business travel are offset.

### Engaging our colleagues

We want to engage our colleagues and help them upskill as we all transition to a low-carbon economy and try to lower their personal carbon footprint. We partner with a number of community programmes for colleagues to take part in, and raise awareness on global environmental campaigns such as World Environment Day and Earth Hour, as well as operating 11 employee-led environmental networks globally. In 2021, we piloted a colleague app where users earn 'green points' for completing sustainable actions such as avoiding single-use plastic and switching off monitors when they are not being used. This resulted in more than 850 employees in the UK taking more than 6,000 actions, helping to avoid an estimated 15,000 kg CO<sub>2</sub>e.

### Carbon offsetting

We purchase carbon offsets, under the VCS to compensate for any remaining emissions in our operations and business travel.

We conduct due diligence as part of our procurement of carbon offsets. We have invested in a portfolio of credits, under the VCS, that come from approved methodologies. In addition to internal reviews, we also undertake third-party review of the project portfolio from an independent voluntary carbon markets advisory firm, which is not directly involved in the sourcing process. All final projects must pass independent due diligence screening based on risk assessment in five key areas – location, technology, additionality, environmental/social impacts and environmental/social benefits.

As part of our operational and business travel carbon offsetting strategy, we maintain support for nature-based climate solutions. This includes the purchase of carbon credits from REDD+ avoided deforestation projects, as well as a project by Indigo which seeks to enhance soil carbon in agricultural land. We recognise the importance of ensuring the integrity of natural capital and we screen nature-based offsets against established methodologies and where possible, have additional environmental and social co-benefits.

We firmly support initiatives to enhance the integrity and quality of the voluntary carbon markets including the work of the Taskforce on Scaling Voluntary Carbon Markets.

### ESG Data Hub

See the ESG Data Hub for further details on our annual operational greenhouse gas emissions since 2018, including our scope 1, scope 2 and scope 3 business travel location-based and market-based emissions. We further provide insights on our annual waste production, energy and water consumption and renewable electricity consumption by country.

Further details relating to our operational footprint can be found at: [home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/](https://home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/)



## Metrics and targets continued

### 2. Reducing our financed emissions

In 2020, we set an ambition to be a net zero bank by 2050 and committed to align all of our financing to the goals and timelines of the Paris Agreement.

In order to meet this ambition, we need to reduce the client emissions that we finance, not just for lending but for capital markets activities as well. To help us achieve that, we developed BlueTrack™<sup>1</sup>, our methodology for measuring financed emissions and tracking them at a portfolio level against the goals of the Paris Agreement. BlueTrack™ builds on and extends existing industry approaches to cover not only lending but also capital markets financing. We believe our approach to measuring financed emissions better reflects the breadth of our provision of financing for clients through our investment bank.

We started by setting targets for the Energy and Power sectors because they are responsible for up to three-quarters of all Greenhouse Gas (GHG) emissions globally. As a founding member of the Net-Zero Banking Alliance (NZBA), we intend to use science-based decarbonisation scenarios to set targets for a number of high emitting sectors by 2024.

When we developed BlueTrack™, we acknowledged it was a first generation methodology and we would continue to enhance and refine it.

In 2021, we continued to develop our methodology including adding granularity and updating external client and industry data as these become available over time. We have re-performed the 2020 year-end estimates (as reported in 2020) by enhancing those estimates with the improved data that became available during 2021.

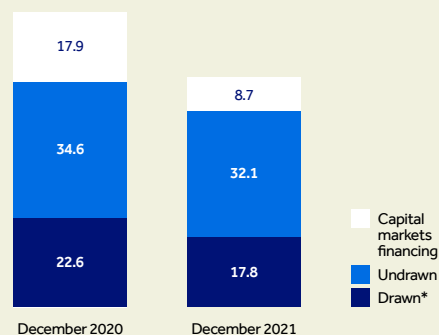
On a net basis, these changes had no notable impact on our baseline data as reported. As our methodology evolves we will continue to review the impact on our reported baselines and we will re-perform estimates from time to time with available data.

There is no consistent industry-wide approach to measuring emissions and approaches continue to evolve. We are actively involved in industry-wide initiatives to build consensus on carbon accounting and portfolio alignment, for example through our membership of The Partnership for Carbon Accounting Financials (PCAF).

We continue to evolve our approach and welcome the continuing industry efforts to converge on a common standard.

#### Breakdown of energy emissions attributed to forms of financing

Attributed MtCO<sub>2</sub>



\* Includes credit risk exposures in addition to Loans and Advances such as the utilisation of certain off-balance sheet exposures.

The chart above shows the absolute financed emissions associated with our Energy portfolio as reported in BlueTrack, broken down into the financed carbon emissions associated with the major components of our financing portfolios: drawn balances, undrawn committed limits and capital markets financing.

#### Energy & Power

In November 2020, we set a target for a 30% reduction in the CO<sub>2</sub> intensity of our Power portfolio by 2025, as well as a target for a 15% reduction in absolute CO<sub>2</sub> emissions of our Energy portfolio by 2025.

In 2021, we reduced our absolute financed emissions in Energy by 22%, exceeding our 2025 Energy targets. This reflects year-on-year reductions in borrowing and capital markets volumes across the market to more normalised levels, as well as conscious changes to our lending portfolio, where we have re-evaluated credit risk limits in segments of the Energy sector which could be most adversely affected by climate change. In 2022, a post COVID-19 pandemic rebound of the markets may result in increased issuance volumes which in turn may reverse some of our progress achieved to date. However, we also expect to see further reduction in our clients' emissions as they implement their transition plans.

Our Power portfolio has seen an 8% net decrease in emissions intensity during 2021, reflecting changes in both our lending and capital markets activity. We have supported our Power clients in transitioning their business models: in 2021, across all sectors, we facilitated £29.8bn<sup>2</sup> of total green financing, up 70% from £17.6bn in 2020. This includes £2.5bn used to directly fund renewable power generation projects. This increase in green financing<sup>2</sup> across the Power sector reflects the increased emphasis both issuers and investors are placing on accelerating the transition to a low-carbon economy, which is reflected in the reduction in emissions intensity of our financing.

While we have seen solid progress against our targets in 2021, it is important to note that progress towards our targets will likely be volatile and non-linear. The transition to a low-carbon economy will be reflective of the specific pathways companies take. For some sectors progress can occur in the short term while for others, the technologies required to transition are not yet fully available meaning they are likely to transition at a later point in time.

Achieving our targets will largely depend on our clients' progress on their individual transition pathways. Many of our clients have published their own transition plans and report on their progress; other clients have not yet made their transition plans public. We expect that, over time, more clients will publish plans and also that many of our clients will be able to accelerate their plans beyond what is known today. In the short term, we may experience significant decreases or increases in our metrics, partly due to the volatility of the mix and volume of capital markets financing (included in our metrics) which is generally beyond our control and due to the pace of our clients' emission reductions.

We continue to focus on understanding our Power and Energy clients' transition plans. There has been a notable acceleration in clients' targets and climate commitments, particularly as they look to decarbonise their own operations (scope 1 and 2) with some clients also now including scope 3 emissions in their climate targets. In our Energy portfolio, approximately three quarters of our financing is with Energy producers that have published decarbonisation targets; over half of our financing is to clients that have committed to becoming net zero in their scope 1 and 2 carbon emissions by 2050. We have also seen an increase in decarbonisation commitments from our Power utilities clients. As companies release their annual reported metrics for 2021 in the coming months, we expect to see further details and evidence of their progress against their commitments, which will be reflected in our metric over time.

#### Notes

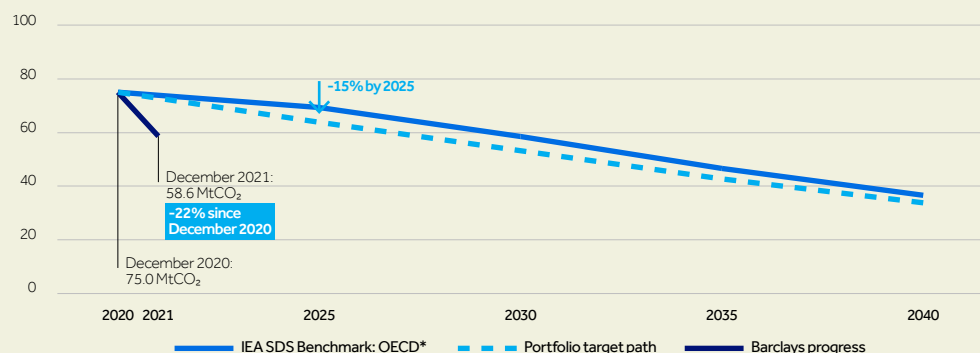
- 1 Further information and a detailed methodology whitepaper are available online, see <http://home.barclays/content/home-barclays/en/home/sustainability/addressing-climate-change/reducing-our-financed-emissions/bluetrack>
- 2 Further details on our green financing can be found on pages 69 to 72 of the Barclays PLC 2021 Annual Report.

# Metrics and targets continued

## Our current estimate of our clients' activity based on our disclosed methodology

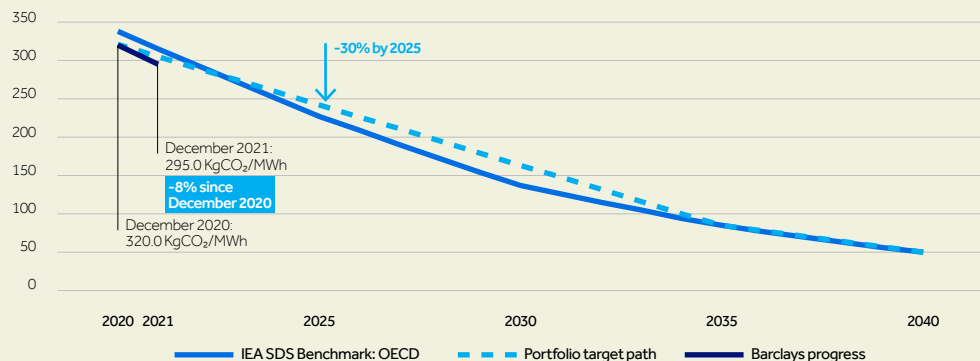
### BlueTrack™ financed emissions – Energy

Absolute emissions MtCO<sub>2</sub>



### BlueTrack™ financed emissions – Power

Emissions intensity KgCO<sub>2</sub>/MWh



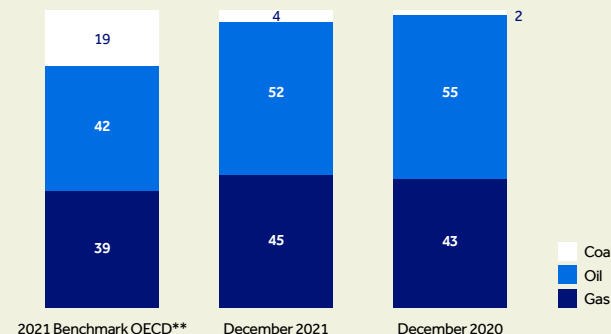
**Notes**

\* [iea.org/reports/world-energy-outlook-2019](http://iea.org/reports/world-energy-outlook-2019)

\*\* The 2021 Benchmark OECD data provided is interpolated i.e. As the IEA 2019 SDS OECD report only provides data for certain time points, the years in between these time points are linearly interpolated to generate estimated values, including the value used for 2021.

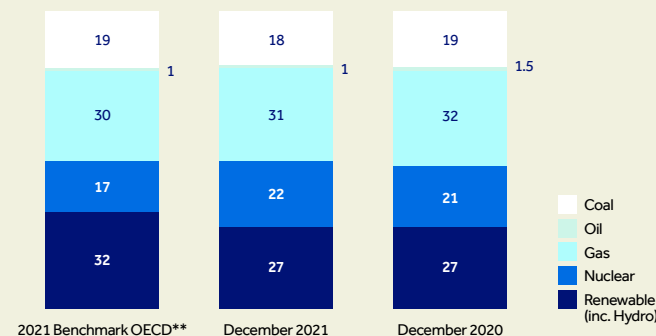
### Fuel mix – Energy

%



### Fuel mix – Power

%



- Barclays attempts to split our financed emissions by fuel type. Where individual counterparties operate across fuel types, our methodology weights our financing according to the estimated revenue that a counterparty earns from the respective fuel. On this basis, the proportion of Coal in the Energy sector continues to be low, with the percentage increase driven in part by the significant reduction across Oil and Gas.
- Important note: The IEA's Sustainable Development Scenario (OECD) for [2021] benchmark is weighted by production. As such, due to the differences in weighting methodology a direct comparison between Barclays' fuel mix and that of SDS Benchmark is not applicable.
- Note: Totals in Fuel mix may not be equal to 100% due to rounding.

## Metrics and targets continued

### 3. Financing the Transition

#### Our target to facilitate £100bn of green financing

We facilitated £29.8bn<sup>Δ</sup> of green financing in 2021, up 70% from £17.6bn in 2020 and comprised of:

- labelled, 'use of proceeds' and business mix financing in environmental categories (£22.6bn<sup>Δ</sup> in 2021), and
- sustainability-linked financing that incorporates environmental performance targets (£7.2bn<sup>Δ</sup> in 2021).

Since 2018, a total of £62.2bn<sup>Δ</sup> has been facilitated across these categories, with significant momentum across our businesses, products and geographies.

Breaking down our green financing by product type, the largest product category was debt, accounting for 63% (2020: 70%) of the total. Loans and equity made up 21% (2020: 21%) and 15% (2020: 9%) respectively, while the remaining 1% (2020: 0%) consisted of investments and contingent.

49% of our financing in 2021 was for clients in the UK and Europe (2020: 51%), while 43% was in the US (2020: 45%) and 8% in Asia and the rest of the world (2020: 4%).

#### Facilitate £150bn of social, environmental and sustainability-linked financing

We facilitated £69.2bn<sup>Δ</sup> of social, environmental and sustainability-linked financing in 2021, up 14% from £60.9bn in 2020.

#### Environmental financing

Our environmental financing consists of labelled, 'use of proceeds' and business mix financing in environmental categories. In 2021, it grew by 53% to £22.6bn<sup>Δ</sup> versus £14.8bn in 2020 reflecting the strong increase in demand for environmental financing and our strategy to work with our clients and customers to help facilitate their transitions to a lower carbon economy. We helped the UK Government issue its £10bn green gilt and acted as lead manager on seven out of eight inaugural syndicated green bonds issued by European sovereigns since 2017<sup>1</sup>.

#### Sustainability-linked financing

In addition to dedicated 'use of proceeds' transactions where financing is allocated to specific eligible green, projects or assets, sustainability-linked bonds (SLBs) and sustainability-linked loans (SLLs) are forward looking, performance-based debt instruments issued with specific key performance indicators and sustainability performance targets at the level of an entire entity.

Our sustainability-linked financing totalled £7.2bn<sup>Δ</sup> in 2021, up 158% from £2.8bn in 2020. The SLB market grew significantly in 2021<sup>2</sup>. Investors and issuers alike are using these instruments to embed their sustainability targets into financing commitments.

The legal and regulatory landscape relating to sustainable financing, including the naming and categorisation of products as 'green', 'social', 'sustainability-linked' and otherwise, is rapidly evolving and there are divergent approaches across jurisdictions. We continue to review and develop our approach to sustainable finance as this subject area matures.

For further details on Barclays Sustainable Finance Framework, see the ESG Resource Hub at: <https://home.barclays/sustainability/esg-resource-hub/reporting-and-disclosures/>

#### Sustainable Impact Capital

Our Sustainable Impact Capital Programme, led by the Barclays Principal Investments team in Treasury has a mandate to invest up to £175m of equity capital in sustainability-focused start-ups by 2025, helping to accelerate our clients' transition towards a low-carbon economy.

From the acceleration of innovative carbon-efficient technologies and supply chains to supporting the development of viable markets for carbon capture and sequestration, the Programme is seeking out and supporting clear, scalable propositions that deliver both environmental benefits and economic returns.

Through the Programme, we aim to fill growth stage funding gaps to help accelerate and scale catalytic and strategic solutions to environmental challenges

#### Sustainable Impact Capital Programme

£m



#### Achieved to date

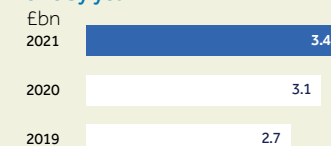
£54m

The Programme has made meaningful progress towards its five year trajectory to meet our target by building a portfolio of strategic investments which have a focus on reducing carbon footprints and accelerating the transition to a low-carbon economy. £54m of the £175m overall target has been deployed since 2020, with £30m invested in 2021, up 25% from 2020.

In 2022, the Programme will continue deploying capital to foster innovation to support Barclays' net zero ambition.

Further examples of our green innovation financing can be found at: [home.barclays/sustainability/our-position-on-climate-change/accelerating-the-transition/sustainable-impact-capital/](https://home.barclays/sustainability/our-position-on-climate-change/accelerating-the-transition/sustainable-impact-capital/)

#### Green bond investment portfolio size by year



9% increase in green bond portfolio in 2021 against a target of £4bn over time

#### Green Bond Investment Portfolio

As an investor, we have continued to expand our ESG portfolio during 2021. Issuance volume within the market grew strongly and was driven by sovereign names, with notable debut issuances from the European Union and the UK Government, both of which Barclays' Treasury invested in. With increasing focus on post-COVID recoveries having an environmental angle, we see very strong growth opportunities for the green bond market, and we aim to reach our £4bn target portfolio size in the near term.

#### Notes

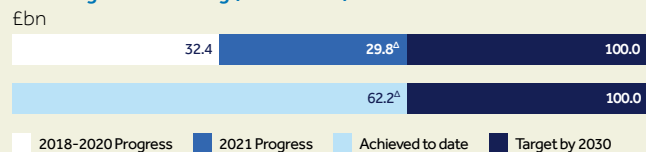
- <sup>1</sup> Sourced via Bond Radar.
- <sup>2</sup> Sourced via Dealogic.

<sup>Δ</sup> 2021 data reproduced from the Barclays PLC Annual Report subject to independent Limited Assurance under ISAE(UK)3000 and ISAE3410. Refer to the ESG resource hub for details: [home.barclays/sustainability/esg-resource-hub/](https://home.barclays/sustainability/esg-resource-hub/)

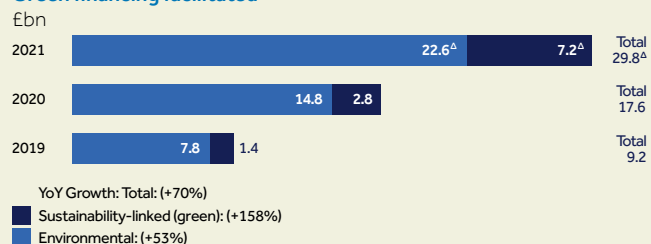
# Metrics and targets continued

## Green financing dashboard

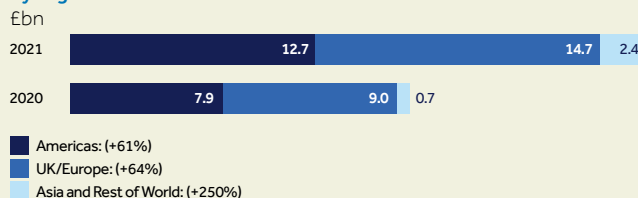
### £100bn green financing (2018-2030)



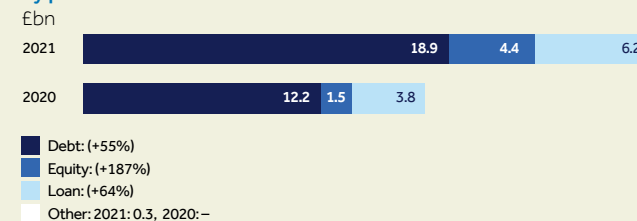
### Green financing facilitated



### By region



### By product



Δ 2021 data reproduced from the Barclays PLC Annual Report subject to independent Limited Assurance under ISAE(UK)3000 and ISAE3410. Refer to the ESG resource hub for details: [home.barclays/sustainability/esg-resource-hub/](https://home.barclays/sustainability/esg-resource-hub/)

## Metrics and targets continued

### 4. Climate Risks

#### Carbon-related assets

We also disclose concentrations of credit exposure to carbon-related assets. In its recently updated 2021 guidance, the TCFD recommends that carbon-related assets are those assets tied to the energy, transportation, materials and buildings and agriculture, food and forest products sectors which is a broadening of the definition compared to the 2017 TCFD Annex guidance\*.

All of the sectors that the TCFD now considers to be carbon-related assets include the sectors that Barclays considers at elevated risk from the impacts of climate change. In the Appendix (Credit concentration by elevated risk sector) we have indicated the amount of exposure from carbon-related assets that directly corresponds with our classification of elevated risk sectors for consistency with previous disclosures.

#### Elevated risk sectors

##### Credit exposures

Barclays is working to understand the risks associated with sectors sensitive to the impacts from climate change. Disclosing risk management metrics and quantitative credit exposures supports this approach and our ongoing alignment with the TCFD recommendations. The sectors highlighted blue in the table represent those that the Group considers at an elevated risk from the impacts of climate change. However, in each sector there will exist a range of vulnerabilities and as such these figures do not represent elevated carbon emission exposures and should not be interpreted as an indicator of relative carbon intensity. These sectors have been identified through an analysis of Barclays Industrial Classifications by portfolio and benchmarked against Moody's and other external sources, with additional input from subject matter experts.

\*In the 2017 Annex, the Task Force suggests banks define carbon-related assets as those assets tied to the energy and utilities sectors under the Global Industry Classification Standard. In the 2021 Annex, the Task Force does not reference the Global Industry Classification Standard. To support alignment in our reporting of carbon-related assets with other metrics within our report, we have identified sectors under the Barclays Industry Classification Standard.

#### Carbon-related assets (including sub-sector breakdown)

	2021 £m	2020 £m	% change
<b>Agriculture, Food and Forest Products</b>	<b>14,719</b>	14,627	0.63%
<b>Agriculture</b>	<b>5,043</b>	5,802	
Food, Bev and Tobacco	<b>8,800</b>	8,129	
Paper and Forest Products	<b>875</b>	696	
<b>Energy</b>	<b>25,646</b>	27,981	-8.34%
<b>Coal Mining and Coal Terminals<sup>†</sup></b>	<b>45</b>	29	
<b>Oil &amp; Gas</b>	<b>12,869</b>	15,613	
<b>Power Utilities</b>	<b>12,732</b>	12,339	
<b>Materials and Building</b>	<b>51,960</b>	51,804	0.30%
<b>Cement</b>	<b>324</b>	358	
<b>Chemicals</b>	<b>4,308</b>	4,926	
Construction and Materials	<b>2,919</b>	3,201	
Homebuilding and Property Development	<b>5,774</b>	6,035	
Manufacturing	<b>14,385</b>	14,110	
Metals	<b>742</b>	936	
<b>Mining (incl. diversified miners)<sup>‡</sup></b>	<b>1,408</b>	1,608	
Packaging Manufacturers: Metal, Glass and Plastics	<b>370</b>	254	
Real Estate	<b>21,493</b>	20,084	
<b>Steel</b>	<b>236</b>	292	
<b>Transport</b>	<b>11,422</b>	11,305	1.04%
<b>Automotive</b>	<b>5,568</b>	5,530	
<b>Aviation</b>	<b>2,049</b>	1,991	
Other Transport Services	<b>1,663</b>	1,495	
Ports	<b>189</b>	239	
<b>Road Haulage</b>	<b>1,026</b>	1,137	
<b>Shipping</b>	<b>927</b>	912	
<b>Subtotal (elevated risk sectors)</b>	<b>46,535</b>	<b>50,537</b>	-7.92%
<b>Grand Total</b>	<b>103,747</b>	<b>105,717</b>	-1.86%

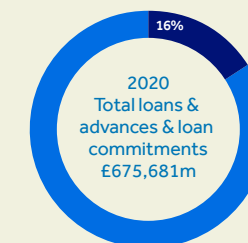
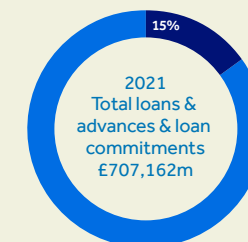
#### Notes

- Over the last year we have continued to evolve our understanding of climate and carbon-related risk and have reviewed our Barclays Industrial Classifications and Sector classifications to ensure they accurately reflect these risks. As a result of these reviews, we have identified additional areas within the broader sector categories, which we deem elevated climate and/or carbon risk, or have isolated sub-sectors within broader sector categories that pose greater risk than the wider sector itself. These updates cover Automotive, Cement, Chemicals, Mining and Road Haulage.
- Barclays does not consider all parts of the Power Utilities value chain exposed to elevated climate risk, for instance Renewable Power Production. Climate risk for this sector may depend on a number of factors such as the reliance and/or focus of the company on fossil fuels. As such, exposures for this sector show the portion of the Power Utilities sector where we do identify elevated climate risks.

<sup>†</sup> Coal Mining and Coal Terminals relates to one client predominantly engaged in metallurgical coal mining.

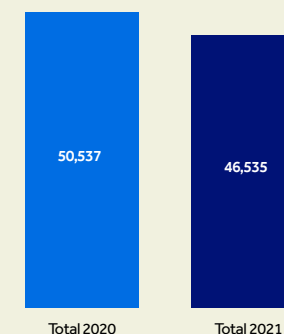
<sup>‡</sup> Diversified miners with minority interests in thermal coal mining are included in this category.

#### Carbon-related assets



#### Elevated risk exposure

£m



## Metrics and targets continued

### Financing (capital markets)

To facilitate greater understanding and transparency of our capital markets financing, in 2020 we disclosed the total capital raised for clients across all sectors using data sourced from Dealogic.

To aid continued transparency and comparability in our annual reporting, we have provided the same breakdown for our 2021 financing below. The data is prepared in a consistent manner to 2020. It is sourced from Dealogic and the industry sector categories are designated by Dealogic General and Specific Industry

Group classifications. Financing volumes are reported on a manager-proceeds basis including bonds, equities, loans and securitised bonds and no modifications have been made by Barclays.

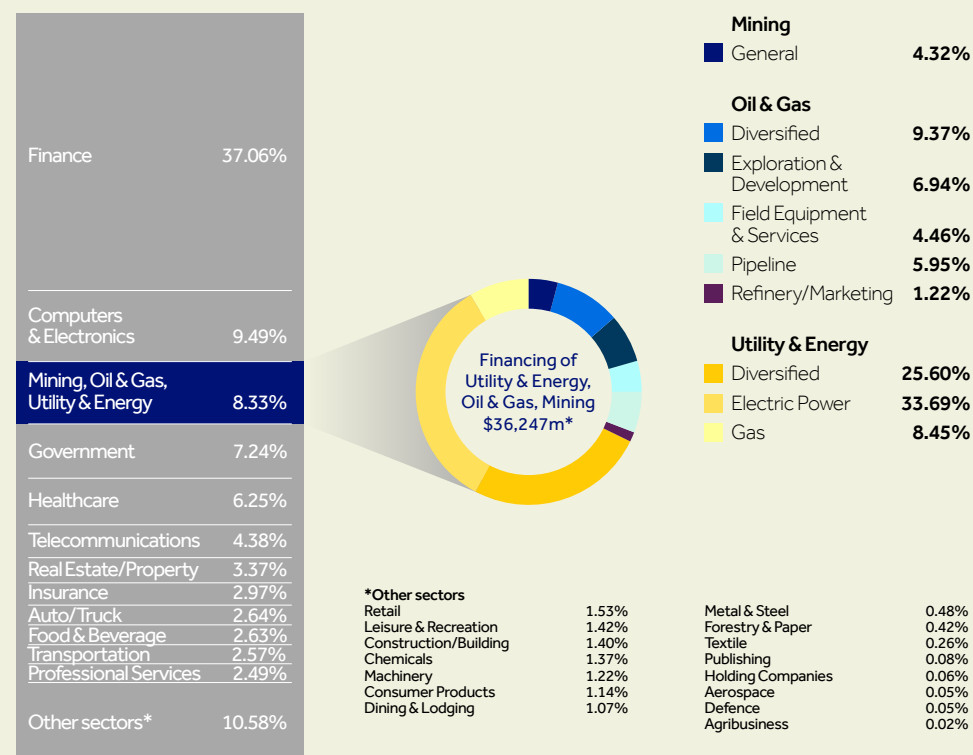
This data represents a third party view of our financing and is subject to Dealogic's league table methodology, which pro-rates volume across lead-managers. We are presenting the data in this format to support transparency and comparability but it should be noted that this data is subject to further analysis and methodological enhancements, before it is included in BlueTrack™.

Carbon-related energy and extractive sectors (Dealogic Industry Classification)	2021 \$m	2020 \$m	2020 v 2021% difference
Mining (General) Total	<b>1,566</b>	1,494	4.8%
Oil & Gas Total	<b>10,128</b>	20,982	-51.7%
Utility & Energy Total	<b>24,553</b>	22,982	6.8%
Grand Total	<b>36,247</b>	45,458	-20.3%
Total green/sustainable/social bonds and company issuers defined as Renewables	<b>7,496.5</b>	3,456.5	116.9%
Total of all industries	<b>547,597</b>	507,130	8.0%

#### Note

2020 figure has been recalculated by Dealogic as data on deals is confirmed throughout the year. In Barclays TCFD Report 2020, our 2020 total financing figure was reported as \$504,030m.

### Total financing (capital markets) 2021 \$547,597m



#### \*Notes

Excludes non-carbon-related utilities: waste management, hydroelectric power and water totalling \$1,872m. Also excludes green/sustainable/social bonds and company issuers defined as Renewables totalling \$7,497m.

## Glossary



<i>Term</i>	<i>Explanation</i>
BlueTrack™	BlueTrack™ is Barclays' methodology for measuring our financed emissions, and tracking them at a portfolio level against the goals of the Paris Agreement. BlueTrack™ currently measures carbon, and includes capital markets financing in addition to lending.
Carbon removals	The action of removing GHG emissions from the atmosphere and store it through various means, such as in soils, trees, underground reservoirs, rocks, the ocean, and even products like concrete and carbon fibre.
Climate Biennial Exploratory Scenario (CBES)	The Bank of England runs regular stress tests to help assess the resilience of the UK financial system and individual institutions. The 2021 Biennial Exploratory Scenario will explore the resilience of the UK financial system to the physical and transition risks associated with different climate pathways.
Climate Internal Stress Test	Barclays' 2020 Climate Internal Stress Test, which explored a 'Disorderly' climate scenario over a 30-year horizon.
Financed emissions	Emissions that banks and investors finance through their loans and investments.
Financial Stability Board (FSB)	The Financial Stability Board (FSB) is an international body that monitors and makes recommendations about the global financial system. The Financial Stability Board established the TCFD to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit, and insurance underwriting decisions and, in turn, enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system's exposures to climate-related risks.
Greenhouse Gas (GHG)	The GHG protocol defines GHGs as the six gases listed in the Kyoto Protocol: carbon dioxide (CO <sub>2</sub> ); methane (CH <sub>4</sub> ); nitrous oxide (N <sub>2</sub> O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF <sub>6</sub> ).
Internal Capital Adequacy Assessment Process (ICAAP)	The purpose of the Internal Capital Adequacy Assessment Process (ICAAP) is to identify and quantify the risks the firm is exposed to, and to assess whether Barclays holds adequate capital to support these risks.
Internal Liquidity Adequacy Assessment Process (ILAAP)	Barclays maintains an Internal Liquidity Adequacy Assessment Process (ILAAP) document. The ILAAP contains an assessment of the key liquidity risk drivers along with a description of the systems and controls in place to manage and mitigate liquidity risks.
International Energy Agency (IEA) Sustainable Development Scenario (SDS)	The International Energy Agency (IEA) has developed a large-scale simulation model that projects how energy markets could function in the medium to long term. From that model comes the Sustainable Development Scenario (SDS). SDS is a 'well below 2°C' pathway, and represents a gateway to the outcomes targeted by the Paris Agreement. It is based on a surge in clean energy policies and investment and is consistent with limiting the global temperature rise to 1.65°C (with a 50% probability).
Paris Agreement	The Paris Agreement is a legally-binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris. Its goal is to limit global warming to well below 2°C, preferably to 1.5°C, compared to pre-industrial levels.

## Glossary continued

<i>Term</i>	<i>Explanation</i>
Renewables	Energy taken from sources that are inexhaustible, e.g. wind, water, solar, geothermal energy, and biofuels.
Scenario analysis	Efforts to mitigate and adapt to climate change are without historical precedent. Forward-looking analyses, such as scenario analysis, can help organisations consider a broader range of assumptions, uncertainties, and potential future states when assessing financial implications of climate change.
Sovereigns, Supranationals and Agencies (SSA)	Supranational bonds are defined as those issued by entities formed by two or more central governments to promote economic development for the member countries (e.g. the European Investment Bank and the Asian Development Bank). Sovereign bonds include securities that have an explicit government guarantee or support from the sovereign, principal, or state government. An agency bond is a security issued by a government-sponsored enterprise or by a federal government department other than the US Treasury.
Task Force on Climate-related Financial Disclosures (TCFD) Recommendations	The TCFD recommendations are structured around four thematic areas that represent core elements of how organisations operate: governance, strategy, risk management, and metrics and targets. They also include explicit guidance for Banks.
TCFD Report	Barclays' climate-related financial disclosures consistent with the TCFD Recommendations is referred to as the TCFD Report.



## Industry collaboration

External body	Barclays' engagement
 <p>Banking Environment Initiative (BEI)</p>	<p>Barclays is a founding member of the Banking Environment Initiative (BEI), which is a group of global banks committed to pioneering actionable pathways towards a sustainable economy. The BEI is convened by the Cambridge Institute for Sustainability Leadership (CISL).</p>
 <p>CERES</p>	<p>Barclays has been a member of Ceres since 2019. During 2020, we were engaged in their working group on Land Use and Climate (LAC) and we remain engaged with the organisation on other sustainability topics.</p>
 <p>HRH the Prince of Wales' Sustainable Markets Initiative's (SMI) – Financial Services Task Force (FSTF)</p>	<p>During 2021, Barclays was a member of HRH the Prince of Wales' Sustainable Markets Initiative's (SMI's) Financial Services Taskforce (FSTF) and was involved in both the Net Zero Emissions working group and the Carbon Offsetting working group. In late 2021, the FSTF published a Net Zero Practitioner's Guide for Banks, to which Barclays contributed.</p>
 <p>Partnership for Carbon Accounting Financials (PCAF)</p>	<p>Barclays has been a member of PCAF since 2020. During 2021, Barclays co-chaired the PCAF Working Group on Capital Markets Activities which published a Discussion Paper on Capital Markets Instruments in November 2021. Barclays was also involved in reviewing other new methods that PCAF published for consultation in late 2021, including Green Bonds, Sovereign Bonds and Negative Emissions.</p>
 <p>PRA/FCA Climate Financial Risk Forum (CFRF)</p>	<p>During 2021, Barclays was a member of the Climate Financial Risk Forum's Disclosure Working Group and Innovation Working Group. Barclays contributed to reports published by the working groups during the year, including on a CFRF recommended climate data and metrics dashboard and certain Barclays case studies.</p>
 <p>Taskforce on Nature-related Financial Disclosures (TNFD)</p>	<p>Barclays is a member of the Taskforce on Nature-related Financial Disclosures (TNFD) Forum, which is a consultative network of institutional supporters who share the vision and mission of the TNFD.</p>
 <p>United Nations Environment Programme Finance Initiative (UNEP FI)</p>	<p>Barclays has been a member of UNEP FI for more than 20 years. In the last few years, Barclays has partnered with UNEP FI by engaging in their TCFD pilot project in 2018/19; by becoming a founding signatory of the Principles for Responsible Banking (PRB), by joining the Net-Zero Banking Alliance (the banking component of the Glasgow Financial Alliance for Net Zero (GFANZ)). A Barclays representative was elected on behalf of Western Europe to the UNEP FI Banking Board.</p>
 <p>World Business Council for Sustainable Development (WBCSD)</p>	<p>In 2021, Barclays became a member of the Banking for Impact on Climate in Agriculture (B4ICA) initiative when it launched in November. B4ICA is backed by WBCSD in partnership with UNEP FI, PCAF and the Environment Defence Fund (EDF) and aims to bring together banks to develop best-in-class technical data-solutions to support themselves and their clients to align their financial portfolios in the food, agriculture, and land use space towards net zero and Paris Agreement goals.</p>

## Appendix (Credit concentration by elevated risk sector)

Overview of credit exposures by industry sector: 'manufacturing', 'energy and water', 'wholesale and retail distribution and leisure' and 'other' are those standard categories, as disclosed in the Annual Report, that have been identified to contain exposures at an elevated risk from the impacts of climate change. The tables below show, for these four categories, loans and advances at amortised cost and loan commitments at a total Group level and for those sectors at an elevated risk from the impacts of climate change. The data presented is before the effects of netting, collateral and risk transfer have been applied.

Credit risk concentration by elevated risk sector	Manufacturing €m	Energy and water €m	Wholesale and retail distribution and leisure €m	Other €m	Total €m
As at 31 December 2021					
<b>Group total</b>					
<b>On-balance sheet:</b>					
Loans and advances at amortised cost	6,701	4,345	11,455	11,034	33,535
<b>Off-balance sheet:</b>					
Loan commitments	42,587	26,461	16,299	26,845	112,192
<b>Total</b>	<b>49,288</b>	<b>30,806</b>	<b>27,754</b>	<b>37,879</b>	<b>145,727</b>
<b>Identified as elevated climate risk sectors:</b>					
On-balance sheet:	1,435	2,582	585	5,708	10,310
<b>Loans and advances at amortised cost</b>					
Off-balance sheet:					
<b>Loan commitments</b>	<b>10,771</b>	<b>18,703</b>	<b>717</b>	<b>6,034</b>	<b>36,225</b>
<b>Total</b>	<b>12,206</b>	<b>21,285</b>	<b>1,302</b>	<b>11,742</b>	<b>46,535</b>
<b>Of which:</b>					
Agriculture	261	–	–	4,782	5,043
Automotive	5,568	–	–	–	5,568
Aviation	–	–	8	2,041	2,049
Cement	324	–	–	–	324
Chemicals	4,161	–	147	–	4,308
Coal Mining and Coal Terminals†	–	45	–	–	45
Mining (incl. diversified miners)‡	–	1,408	–	–	1,408
Oil & Gas – Upstream	–	5,663	–	–	5,663
Oil & Gas – Midstream	–	–	–	2,933	2,933
Oil & Gas – Services	–	1,437	–	33	1,470
Oil & Gas – Downstream	1,656	–	1,147	–	2,803
Power Utilities	–	12,732	–	–	12,732
Road Haulage	–	–	–	1,026	1,026
Shipping	–	–	–	927	927
Steel	236	–	–	–	236
<b>Grand Total</b>	<b>12,206</b>	<b>21,285</b>	<b>1,302</b>	<b>11,742</b>	<b>46,535</b>

† Coal Mining and Coal Terminals relates to one client predominantly engaged in metallurgical coal mining.

‡ Diversified miners with minority interests in thermal coal mining are included in this category.

Credit risk concentration by elevated risk sector	Manufacturing €m	Energy and water €m	Wholesale and retail distribution and leisure €m	Other €m	Total €m
As at 31 December 2020					
<b>Group total</b>					
<b>On-balance sheet:</b>					
Loans and advances at amortised cost	8,142	4,722	12,569	11,937	37,370
<b>Off-balance sheet:</b>					
Loan commitments	39,638	25,780	17,165	22,571	105,154
<b>Total</b>	<b>47,780</b>	<b>30,502</b>	<b>29,734</b>	<b>34,508</b>	<b>142,524</b>
<b>Identified as elevated climate risk sectors:</b>					
On-balance sheet:	1,927	2,980	690	6,586	12,183
<b>Loans and advances at amortised cost</b>					
Off-balance sheet:					
<b>Loan commitments</b>	<b>11,124</b>	<b>20,257</b>	<b>1,015</b>	<b>5,958</b>	<b>38,354</b>
<b>Total</b>	<b>13,051</b>	<b>23,237</b>	<b>1,705</b>	<b>12,544</b>	<b>50,537</b>
<b>Of which:</b>					
Agriculture	290	–	432	5,080	5,802
Automotive	5,530	–	–	–	5,530
Aviation	–	–	–	1,991	1,991
Cement	358	–	–	–	358
Chemicals	4,832	–	94	–	4,926
Coal Mining and Coal Terminals†	–	29	–	–	29
Mining (incl. diversified miners)‡	–	1,608	–	–	1,608
Oil & Gas – Upstream	–	7,340	–	–	7,340
Oil & Gas – Midstream	–	–	–	3,256	3,256
Oil & Gas – Services	–	1,921	–	168	2,089
Oil & Gas – Downstream	1,749	–	1,179	–	2,928
Power Utilities	–	12,339	–	–	12,339
Road Haulage	–	–	–	1,137	1,137
Shipping	–	–	–	912	912
Steel	292	–	–	–	292
<b>Grand Total</b>	<b>13,051</b>	<b>23,237</b>	<b>1,705</b>	<b>12,544</b>	<b>50,537</b>

## Important Information

### In preparing this TCFD Report we have:

(i) made a number of key judgements, estimations and assumptions, and the processes and issues involved are complex. This is for example the case in relation to financed emissions, portfolio alignment, classification of environmental financing, operational emissions and measurement of climate risk

(ii) used ESG and climate data, models and methodologies that we consider to be appropriate and suitable for these purposes as at the date on which they were deployed. However, these data, models and methodologies are not of the same standard as those available in the context of other financial information, nor subject to the same or equivalent disclosure standards, historical reference points, benchmarks or globally accepted accounting principles. There is an inability to rely on historical data as a strong indicator of future trajectories, in the case of climate change and its evolution. Outputs of models, processed data and methodologies will also be affected by underlying data quality which can be hard to assess

(iii) reproduced certain data assured by KPMG in the Annual Report. Barclays appointed KPMG to perform limited independent assurance over selected ESG content in the Annual Report which has been marked in the Annual Report with the symbol <sup>Δ</sup>. The assurance engagement was planned and performed in accordance with the International Standard on Assurance Engagements (UK) 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information and the International Standard on Assurance Engagements 3410 Assurance of Greenhouse Gas Statements. A limited assurance opinion was issued, which includes details of the scope, reporting criteria, respective responsibilities, work performed, limitations and conclusion, and is available on our ESG resource hub at: <https://home.barclays/sustainability/esg-resource-hub/>. Certain data assured by KPMG in the Annual Report has been reproduced in this TCFD report. This is marked in this TCFD Report

with the symbol <sup>Δ</sup>. No other information in this TCFD Report has been subject to external assurance or audit.

(iv) the data, models and methodologies used and the judgements estimates or assumptions made are rapidly evolving and this may directly or indirectly affect the metrics, data points and targets contained in this TCFD Report. We continue to review and develop our approach to data, models and methodologies in line with market principles and standards as this subject area matures. Further development of accounting and/or reporting standards could impact (potentially materially) the performance metrics, data points and targets contained in this report. In future reports we may present some or all of the information for this reporting period using updated or more granular data or improved models, methodologies, market practices or standards. Such re-presented information may result in different outcomes than those included in this TCFD Report. Where information is re-presented from time to time, we will identify this and (where we think it is appropriate) include an explanation. It is important for readers and users of this TCFD Report to be aware that direct like-for-like comparisons of each piece of information disclosed may not always be possible from one reporting period to another.

### Forward-looking statements

This document contains certain forward-looking statements within the meaning of Section 21E of the US Securities Exchange Act of 1934, as amended, and Section 27A of the US Securities Act of 1933, as amended, with respect to the Group. Barclays cautions readers that no forward-looking statement is a guarantee of future performance and that actual results or other financial condition or performance measures could differ materially from those contained in the forward-looking statements. These forward-looking statements can be identified by the fact that they do not relate only to historical or current facts. Forward-looking statements sometimes use words such as 'may', 'will', 'seek', 'continue', 'aim', 'anticipate'

'target', 'projected', 'expect', 'estimate', 'intend', 'plan', 'goal', 'believe', 'achieve' or other words of similar meaning. Forward-looking statements can be made in writing but also may be made verbally by members of the management of the Group (including, without limitation, during management presentations to financial analysts) in connection with this document. Examples of forward-looking statements include, among others, statements or guidance regarding or relating to the Group's future financial position, income growth, assets, impairment charges, provisions, business strategy, capital, leverage and other regulatory ratios, capital distributions (including dividend pay-out ratios and expected payment strategies), projected levels of growth in the banking and financial markets, projected costs or savings, any commitments and targets (including, without limitation, environmental, social and governance (ESG) commitments and targets), estimates of capital expenditures, plans and objectives for future operations, projected employee numbers, IFRS impacts and other statements that are not historical fact. By their nature, forward-looking statements involve risk and uncertainty because they relate to future events and circumstances. The forward-looking statements speak only as at the date on which they are made. Forward-looking statements may be affected by a number of factors, including, without limitation: changes in legislation, the development of standards and interpretations under IFRS, including evolving practices with regard to the interpretation and application of accounting and regulatory standards, emerging and developing ESG reporting standards, the outcome of current and future legal proceedings and regulatory investigations, future levels of conduct provisions, the policies and actions of governmental and regulatory authorities, the Group's ability along with governments and other stakeholders to measure, manage and mitigate the impacts of climate change effectively, environmental, social and geopolitical risks, and the impact of competition. In addition, factors including (but not limited to) the

following may have an effect: capital, leverage and other regulatory rules applicable to past, current and future periods; UK, US, Eurozone and global macroeconomic and business conditions; the effects of any volatility in credit markets; market related risks such as changes in interest rates and foreign exchange rates; effects of changes in valuation of credit market exposures; changes in valuation of issued securities; volatility in capital markets; changes in credit ratings of any entity within the Group or any securities issued by such entities; direct and indirect impacts of the coronavirus (COVID-19) pandemic; instability as a result of the UK's exit from the European Union ("EU"), the effects of the EU-UK Trade and Cooperation Agreement and the disruption that may subsequently result in the UK and globally; the risk of cyber-attacks, information or security breaches or technology failures on the Group's reputation, business or operations; and the success of future acquisitions, disposals and other strategic transactions. A number of these influences and factors are beyond the Group's control. As a result, the Group's actual financial position, future results, capital distributions, capital, leverage or other regulatory ratios or other financial and non-financial metrics or performance measures or ability to meet commitments and targets may differ materially from the statements or guidance set forth in the Group's forward-looking statements. Additional risks and factors which may impact the Group's future financial condition and performance are identified in Barclays PLC's filings with the SEC (including, without limitation, Barclays PLC's Annual Report on Form 20-F for the fiscal year ended 31 December 2021), which are available on the SEC's website at [www.sec.gov](http://www.sec.gov).

Subject to Barclays' obligations under the applicable laws and regulations of any relevant jurisdiction, (including, without limitation, the UK and the US), in relation to disclosure and ongoing information, we undertake no obligation to update publicly or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

Growing. Together.

## Financing the transition

Fluence is a global market leader in energy storage products and services, as well as digital applications for renewables and storage. Energy storage technology is at the centre of the decarbonisation of the electric grid and has a critical role to play in enabling the transition to a low-carbon economy.

This year, Barclays supported Fluence by helping them float on the NASDAQ through an Initial Public Offering (IPO). We helped market the IPO over a seven-day virtual roadshow, highlighting the important role Fluence is playing in the transition to the low-carbon economy, as well as the pure-play exposure it provides to investors looking to capitalise on the growing global demand for energy storage and digital capabilities.

Thanks to our collective work, the IPO raised almost \$1bn to fund Fluence's growth plans, attracting a diverse group of very high quality investors. As of February 10, 2022, Fluence, a Siemens and AES company, already has more than 4.6 GW of energy storage deployed or contracted in 30 markets, and approximately 6 GW of wind, solar and storage assets contracted or under management in Australia and California. The IPO will help develop this low-carbon ecosystem even further, helping customers around the world and driving a more sustainable future.



*Enabling greater adoption of renewable energy and decarbonised technologies is vital for accelerating the transition to net zero, and the capital raised from this IPO will help Fluence to be a leader in this effort.*

**Rebecca Boll**  
Chief Product Officer, Fluence

### Barclays PLC Annual Report 2021

A detailed review of Barclays' 2021 performance with disclosures that provide useful insight and go beyond reporting requirements.

### Barclays PLC Climate-related Financial Disclosures 2021

A report aligning to the Task Force on Climate-related Financial Disclosures (TCFD) recommendations in this, the fifth year of disclosure.

### Barclays PLC Pillar 3 Report 2021

A summary of our risk profile, its interaction with the Group's risk appetite, and risk management.

### Barclays PLC Fair Pay Report 2021

An overview of our approach to pay, including the principles and policies of our Fair Pay agenda.

### Barclays PLC Diversity & Inclusion Report 2021

An overview of the Group's approach to building a more inclusive company, including a progress report on each of our six pillars of diversity and inclusion.

### Barclays PLC Country Snapshot 2021

An overview of our global tax contribution as well as our approach to tax, including our UK tax strategy, together with our country-by-country data.

Left: **Rebecca Boll**  
Chief Product Officer, Fluence

Right: **John Plaster**  
Barclays Head of Power & Utilities, Americas

