Climate disclosures of the banks in 2020 (Phase 2)

Benchmarking on how banks are progressing against the TCFD Recommendations

May 2021

Contents

Purpose of this report

Our report in Phase 1 of our analysis issued in April 2021 focused on the key trends observed in the climate disclosures within the 2020 Annual Financial Reports of banks. This report focuses on **Phase 2** of our analysis.

As part of our analysis in Phase 2, we have looked at the standalone reports of banks which contain the climate disclosures made in line with the TCFD recommendations.

This report provides an overview of current climate disclosure practices of banks in terms of their alignment with the recommendations by the Task Force on Climate-related Financial Disclosures (TCFD) and offers insights to those who have a responsibility for preparing and assessing the climate disclosures of a bank.

This report incudes our key observations from benchmarking of the climate disclosures we have performed across **25 major banks**. The banks we have selected span across the UK and Europe, Australia, Canada and the US.

Executive summary

Key observations in climate reporting – Phase 2

Banks have made significant progress in aligning their disclosures with the TCFD Recommendations

100%

of banks in our sample disclosed that they report in line with the TCFD Recommendations

See Page 8

When comparing the disclosures of banks for the four thematic areas of the TCFD Recommendations, some disclosures are more advanced than others

- The disclosures on governance and risk management are relatively more advanced

See Page 12

Climate change is a board matter

- Banks have already put in place their governance structures around climate change – in particular when it comes to oversight of their climate strategy and management of climate-related risks

See Pages 13-16

Banks are aware of the risks that climate change poses to their business – and they are adapting their strategy to deal with these risks

- However, there is often less clarity in the disclosures about the opportunities

See Pages 17-23

Of the surveyed banks, the UK banks led the pack when it comes to the nature and detail of disclosures

- The TCFD Recommendations will become mandatory for premium listed UK banks in 2021. This is reflected in their progress

See Page 11

Many banks clearly indicate they see climate-related risks as financial risks

- Most banks follow the risk categories from the TCFD
- Climate-related risks are also now being embedded in a bank's wider risk management framework

See Pages 24-28

Scenario analysis is still an evolving area

- Most are in the process of setting up their scenario analysis to assess the resilience of their strategy

See Pages 36-37

Most banks have set a net zero target for 2050 that includes financed emissions

- However, they are still in the process of quantifying their financed emissions

See Pages 29-35

Scope and approach

Phase 1 and Phase 2:

Our report in Phase 1 of our analysis on climate disclosures focused on the key trends observed in the climate disclosures within the 2020 Annual Financial Reports of banks.

This report focuses on Phase 2 of our analysis. In phase 2, we have reviewed the climate disclosures included by banks in the standalone reports (as mentioned below). It is in these standalone reports that many of the banks have disclosed their detailed climate disclosures aligned with the TCFD Recommendations. In Phase 2, we have assessed the relative progress made by banks in aligning their climate disclosures with the TCFD Recommendations.

Our combined analysis in Phase 1 and Phase 2 provides insight into how banks are making their climate disclosures in the Annual Financial Report and other standalone reports.

Which banks did we include in our analysis?

We have included **25 major banks** in our analysis of climate disclosures in Phase 1 and Phase 2. This consists of 5 banks in the UK, 5 banks in Europe, 4 banks in Australia, 5 banks in Canada and 6 banks in the US.

For 3 of the US banks selected in our sample for Phase 1, the 2020 standalone reports were not available at the time of conducting our Phase 2 analysis. These 3 US banks were replaced with 3 other US major banks in Phase 2, which are relatively similar in size and market presence. There are no other differences between the banks selected in Phase 1 and Phase 2.

Which reports have we reviewed in Phase 2?

In Phase 2, we reviewed the standalone reports of a sample of banks which contain the climate disclosures made in line with the TCFD Recommendations, as noted below.

- A number of banks in our sample prepared and released a standalone report that focussed entirely on the TCFD Recommendations, usually called the TCFD Disclosures Report. For these banks, we reviewed their TCFD Disclosures Report.
- One bank in our sample included its climate disclosures that align with the TCFD Recommendations in the 2020 Annual Financial Report, and released the relevant pages of its 2020 Annual Report as a standalone document. For this bank, we reviewed the climate disclosures in its 2020 Annual Financial Report in Phase 2 of our analysis.
- The remaining banks in our sample included their climate disclosures that align with the TCFD Recommendations in other standalone reports such as the Environmental, Social and Governance (ESG) Report or Sustainability Report. For these banks, we reviewed the ESG Report or the Sustainability Report.

We reviewed the latest standalone reports for 2020 (either issued in 2021 or 2020).

Scope and approach (continued)

Why are we using the TCFD Recommendations as a reference point in Phase 2?

The TCFD Recommendations provide a framework to help entities more effectively prepare their climate-related financial disclosures – see Page 7. The TCFD Recommendations have emerged as the global reference point for climate-related financial disclosures made by entities, including for banks around the world.

All the banks in our sample have selected to use the TCFD Recommendations.

Accordingly, the TCFD Recommendations allow us to compare and contrast the climate disclosures of banks against a framework that is consistent.

Understanding the results and the Maturity Scale used in Phase 2 of our analysis:

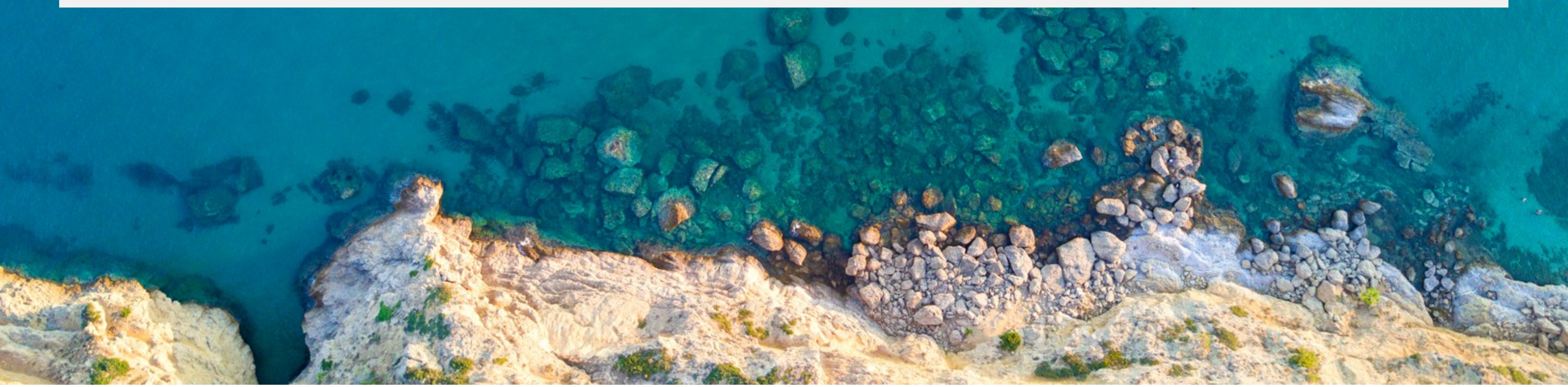
We have used a Maturity Scale to benchmark the climate disclosures of the banks with respect to the TCFD Recommended Disclosures. The Maturity Scale consists of three levels – as shown below.

In this report, we have assigned an overall maturity level to each TCFD Recommended Disclosure and also shown the percentage of banks which had disclosures in each level of the Maturity Scale.

Maturity Scale:

- Green: Disclosures are relatively advanced
- Orange: Disclosures are moderately advanced
- Red: More work to be done on the disclosures

Please refer to Appendix 2 of the report for further details on the Maturity Scale.



The TCFD Recommendations

What is the TCFD?

The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board in 2015 to develop recommendations for more effective climate-related disclosures that:

- could promote more informed investment, credit and insurance underwriting decisions; and
- would 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.

The TCFD’s aim is to make climate-related disclosures more consistent and more comparable across organisations.

What are the TCFD Recommendations?

In 2017, the TCFD released its report which includes its TCFD Recommendations for climate-related disclosures. The TCFD Recommendations consist of **11 Recommended Disclosures across 4 thematic areas.** These 4 thematic areas that represent the core elements of how organisations operate are:

- **1. Governance**
- **2. Strategy**
- **3. Risk Management**
- **4. Metrics and Targets**

For each of the 11 TCFD Recommended Disclosures, the TCFD has provided (i) Guidance and (ii) Supplemental Guidance for banks to assist preparers of these disclosures.

The 11 TCFD Recommended Disclosures as well as the Guidance and the Supplemental Guidance for banks across the 4 thematic areas are outlined in Appendix 1.

Banks and the TCFD Recommendations

The TCFD Recommendations are voluntary. However they are emerging as the leading disclosure framework globally with <u>all</u> banks in our sample aligning their climate disclosures with the TCFD Recommendations.

Although all banks in our sample have reported using the TCFD Recommendations, the nature and level of detail related to the climate disclosures vary across the banks as well as between each TCFD Recommended Disclosure.

The UK banks in our sample are ahead of the curve in terms of the nature and level of detail included in their TCFD-aligned disclosures – see Page 11.

A number of other reporting guidelines/ frameworks also exist for climate change and ESG. Other common guidelines/ frameworks that banks in our sample disclosed they have taken into account in their reporting of climate change as well as ESG include the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB) and the UN Sustainable Development Goals (UN SDGs).

% of banks using the TCFD Recommendations:

100%

Banks and the TCFD Recommendations (continued)

TCFD-aligned disclosures are primarily made in the standalone reports.

- 96% of banks in our sample included their climate-related disclosures that align with the TCFD Recommendations mainly in the standalone documents (i.e. reports other than their 2020 Annual Financial Report) – such as the 'TCFD Disclosures Report' or the 'Sustainability Report'.
  - ❖ The 2020 Annual Financial Report often included a summary of a bank's TCFD Recommended Disclosures with references to the standalone reports for further detail.
  - ❖ At times, the standalone reports also referred to the Annual Financial Report for certain disclosures (such as the remuneration details of senior management).
  - ❖ As a result, users of the Annual Financial Report often need to go through multiple reports in order to fully comprehend a bank's climate-related information.
- 64% of banks included these disclosures in a standalone report that focused entirely on the TCFD Recommended Disclosures, usually called the 'TCFD Disclosures Report'. This is a report separate to the 2020 Annual Financial Report and usually in addition to their Sustainability Report or ESG Report.
- Although significant progress has been made in adopting the TCFD Recommendations, a number of the banks acknowledged they are still in the process of making their climate-related disclosures fully aligned with the TCFD Recommendations.

% of banks reporting their TCFD-aligned disclosures mainly in one or more standalone reports (such as the TCFD Disclosures Report or the Sustainability Report):

% of banks reporting their TCFD-aligned disclosures in a standalone report focused entirely on the TCFD Recommended Disclosures – usually called the TCFD Disclosures Report:

The TCFD recommends that preparers of climate-related financial disclosures provide such disclosures in their mainstream (i.e. public) annual financial filings[1]. The TCFD has stated that it believes climate-related issues are or could be material for many organisations, and its recommendations should be useful to organisations in complying more effectively with existing disclosure obligations.

[1] *Please refer to the TCFD Report titled 'Recommendations of the Task Force on Climate-related Financial Disclosures' for further detail.*

Banks and the TCFD Recommendations (continued)

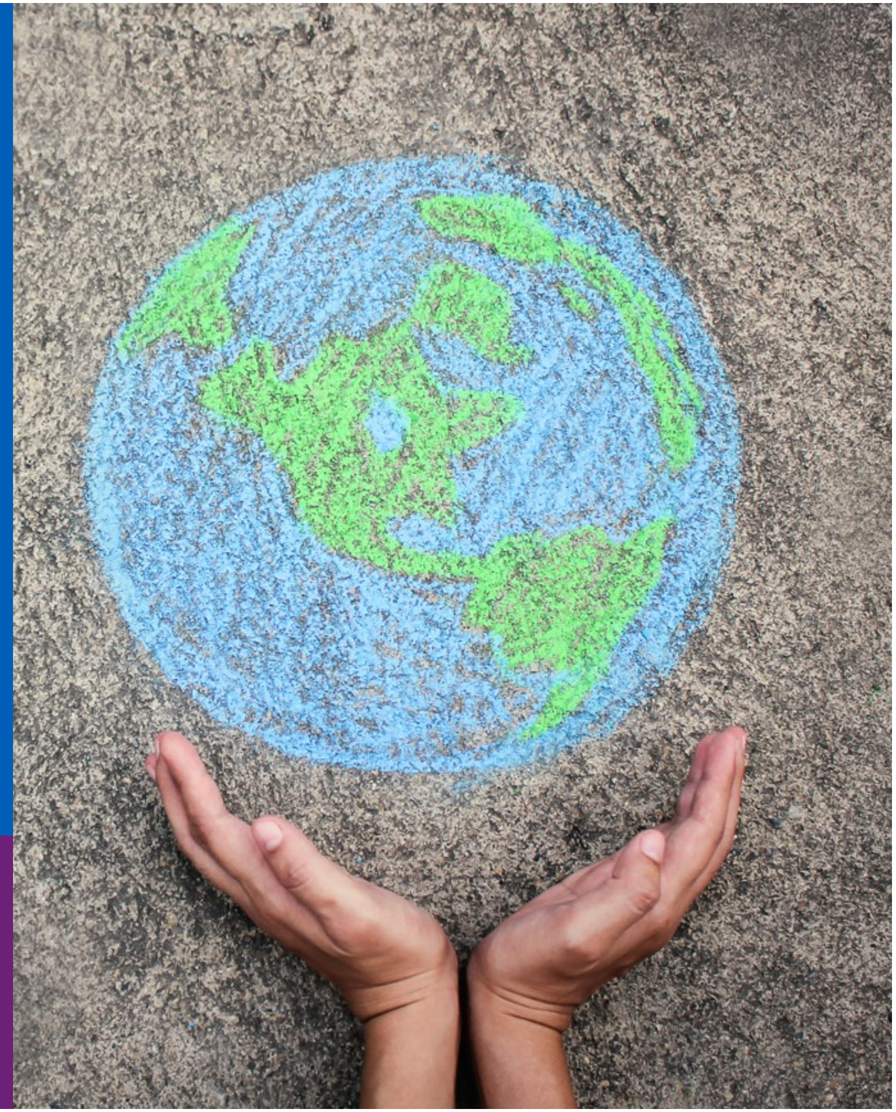
This is a journey for the banks – so where are they in this journey?

For a number of banks, the 2020 reporting cycle marks the first year in which substantive progress has been made on the TCFD-aligned disclosures.

Although significant progress has been made to date, banks are still on their journey to achieving full alignment with the TCFD Recommendations. There are common areas that banks are still working through for which we will see more progress in the coming years – key observations are highlighted below.

- Banks have set up their governance structures and risk frameworks to deal with climate-related risks. However, scenario analysis has been highlighted as an area that is still evolving. Whilst some have disclosed the scenarios they are using, there is little disclosure of the outcome as data availability and lack of granularity seems to be holding back meaningful quantitative analysis at this point in time.
- Banks are very much aware of the risks that climate change poses to them and their customers, and they are adapting their strategy to deal with these risks. There is less clarity in the disclosures about the opportunities though.
- Although most of the banks in our sample have set a net zero target for 2050 that includes financed emissions, it is not yet clear how these emissions will be measured or how these can be measured.

A global perspective



Which banks are ahead of the curve in their climate disclosures?

The UK banks in our sample are leading the pack when it comes to the nature and level of detail in their TCFD-aligned disclosures. In 2021, for premium listed banks, the TCFD recommendations will become mandatory and the prudential supervisor expects banks to disclose their climate-related financial risks and opportunities. This is reflected in their progress.

Key observations from the UK banks:

- The UK banks included more detailed and granular climate-related disclosures in their 2020 Annual Reports as well as their standalone reports.
- Many of the UK banks also included a standalone report that focused entirely on the TCFD Recommendations (i.e. a report that was separate to the 2020 Annual Financial Report as well as the Sustainability Report and the ESG Report). This allowed these banks to provide more focused and detailed disclosures across the four thematic areas covered by the TCFD recommendations.
- From the disclosures made in 2020, it also appears that the UK banks are relatively more advanced in the more complex areas of the TCFD Recommendations such as scenario analysis – See Pages 36-37.

What about the other banks?

We also see that different countries and banks have different focus areas. For example, the banks in Canada and Australia have put a specific focus on the impact of their lending portfolios in specific industries such as mining and agriculture with detailed disclosures in those areas that go over and beyond what we have seen in other countries.

Maturity of the banks' TCFD-aligned disclosures

The table below summarises our assessment of the relative maturity of the TCFD-aligned disclosures reported by the banks in 2020. The 'overall maturity' is an indication of where we have assessed the majority of the sampled banks in the Maturity Scale – see Appendix 2 for details.

Area	TCFD Recommended Disclosure	Overall maturity
Governance	a) Describe the board's oversight of climate-related risks and opportunities.	
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	
Strategy	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	
Risk management	a) Describe the organisation's processes for identifying and assessing climate-related risks.	
	b) Describe the organisation's processes for managing climate-related risks.	
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	
Metrics and targets	a) Disclose the metrics used by the organisation to assess climate related risks and opportunities in line with its strategy and risk management process.	
	b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	

Maturity Scale: Disclosures are relatively advanced | Disclosures are moderately advanced | More work to be done on the disclosures

Governance

Recommended Disclosure:	Overall maturity:
a) Describe the board's oversight of climate-related risks and opportunities.	
b) Describe management's role in assessing and managing climate-related risks and opportunities.	

What is the maturity of climate-related disclosures on governance?

The climate-related disclosures made by the banks on governance are relatively advanced for both TCFD Recommended Disclosures when compared to their disclosures in other areas such as strategy.

It is clear from the disclosures of banks related to governance that climate change is at the forefront of board agendas with clear oversight by the board of directors on climate-related risks and opportunities. Banks in our sample have also made significant progress in assigning climate-related roles and responsibilities to their management, which has resulted in a number of new roles being created during 2020 for sustainability and climate change.

See further details on Pages 14-16.

Governance (continued)

TCFD Recommended Disclosure:

a) Describe the board's oversight of climate-related risks and opportunities

% of banks within the Maturity Scale:

100%

We have assessed the Recommended Disclosure as 'relatively advanced' for 100% of the banks in our sample as all the banks have disclosed details on the board's oversight of climate-related risks and opportunities.

What have banks disclosed?

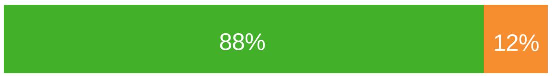
- **Board oversight:** In the past, it has often been unclear on whether or not climate change is a board responsibility.
  - However in 2020, it is clear from the disclosures that climate change is now a board level matter across the banks.
  - The boards and the board committees of banks consider climate-related issues when reviewing and guiding a bank's strategy and risk management policies.
- **Governance structures:** The banks have put in place governance structures with clear lines of reporting to the board and its committees on climate-related matters.
  - The governance structures of banks for climate-related matters are usually based on two reporting streams: one for driving a bank's climate strategy and another for managing its climate-related risks.
- **Training:** Some banks disclosed that their board members have received training on climate change during the year to help them understand and assess the financial risks and opportunities from climate change.
- **Responsibilities of the board committees:** The banks included details of the climate-related responsibilities which have been delegated by the board to its committees.
  - The Risk Committee was commonly noted as the one responsible for managing and monitoring climate-related risks in line with a bank's wider risk management framework.
  - Some banks also noted that they have set-up a Board Committee or an Executive Committee (with a direct reporting line to the board) that is responsible for driving the bank's climate strategy across its business, often chaired by the CEO or the Head of Sustainability.

Governance (continued)

TCFD Recommended Disclosure

b) Describe management's role in assessing and managing climate-related risks and opportunities

% of banks within the Maturity Scale:



We have assessed the Recommended Disclosure as 'relatively advanced' for 88% of the banks in our sample. These banks have clearly disclosed details on management's role in assessing and managing climate-related risks and opportunities.

What have banks disclosed?

- **Management responsibilities:** It's clear from the disclosures that it's not just the board that's getting more involved – but senior management also play an important role.
- **New roles:** A number of the banks in our sample disclosed that they have created new management roles or management committees during 2020 which is a reflection of how banks are putting climate at the forefront of their priorities.
  - Common roles created include the Global Head of Sustainability, the Global Head of Climate Risk, and the Head of Policy and Corporate Responsibility.
- **Strategy:** From a strategic perspective, the banks have usually allocated responsibility for identifying a bank's climate-related opportunities and delivering its climate strategy to either the CEO or the Global Head of Sustainability (or equivalent) who has a direct reporting line either to the board or a board committee responsible for the business strategy.
- **Climate risks:** A number of banks also disclosed they have also allocated responsibility for identifying, measuring, monitoring and managing climate-related risks at the management level with a direct reporting line to the Risk Committee.

Governance

The table below provides an overview of how most banks have aligned their climate disclosures on governance to the TCFD Recommended Disclosures. The table highlights areas where most banks in our sample have provided detailed disclosures and where there are opportunities for further enhancements.

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
a) Describe the board's oversight of climate-related risks and opportunities.	Disclosure of the following: • Processes by which the board and/or board committees are informed about climate-related issues. • Whether the board and/or board committees consider climate-related issues when reviewing and guiding strategy and risk management policies.	Disclosure of the following: • The frequency by which board and/or board committees are informed about climate-related issues. • Whether the board and/or board committees consider climate-related issues when reviewing and guiding major plans of action, annual budgets, and business plans as well as setting the organisation's performance objectives, monitoring implementation and performance, and overseeing major capital expenditures, acquisitions, and divestitures. • How the board monitors and oversees progress against goals and targets for addressing climate-related issues. o *The banks often acknowledged that this was done by the board, however there was not always disclosure on <u>how</u> this was done.*
b) Describe management's role in assessing and managing climate-related risks and opportunities.	Disclosure of the following: • Whether the bank has assigned climate-related responsibilities to management-level positions or committees. • A description of the associated organisational structure. o *The banks with more effective disclosures included a structure diagram clearly showing the governance structure for climate change, including reporting lines from management to the board and board committees.* • How management (through specific positions and/or management committees) monitors climate-related issues.	Disclosure of the following: • Processes by which management is informed about climate-related issues. o *Although a minority of banks reported that they have set-up reporting tools to better inform management on climate-related issues on a timely bases, this is an area where the disclosures could be further enhanced by most banks.*

Strategy

Recommended Disclosure:	Overall maturity:
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.	
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	

What is the maturity of climate-related disclosures on strategy?

The climate-related disclosures made by the banks on strategy are moderately advanced for the first two TCFD Recommended Disclosures, whilst further disclosures could be added for the third Recommended Disclosures related to scenario analysis.

The banks have provided detailed disclosures of the climate-related risks over the short, medium and long term and the impact of these risks on their business. However when looking at opportunities, the disclosures are lighter and less advanced across the banks compared to climate-related risks.

Many of the banks are still in the preliminary stages of assessing the resilience of their strategy taking into consideration different climate-related scenarios. Data availability and lack of granularity seem to be holding back meaningful quantitative analysis at this point in time. This is certainly an area to watch in the coming years as banks develop and refine their methodologies and capabilities in this area and also complete their climate-related scenario analysis to meet upcoming regulatory requirements (e.g. the Bank of England's Climate Biennial Exploratory Scenario Analysis).

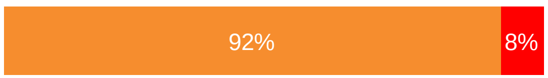
See further details on Pages 18-23 and 36-37.

Strategy

TCFD Recommended Disclosure

a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.

% of banks in the Maturity Scale:



We have assessed the Recommended Disclosure as 'moderately advanced' for 92% of banks in our sample. These banks have provided detailed disclosures on their climate-related risks, but the disclosures on opportunities are generally lighter – see Page 21 for more details.

What have banks disclosed?

- **Climate-related risks:** Banks have broadly categorised climate-related risks into two categories: physical risks and transition risks.
  - Within these categories, the banks have identified the risk types impacted by climate change which they monitor over the short, medium and long term (e.g. credit risk) – see Page 26 for details.
  - ***Credit exposures:*** A number of banks have highlighted the sectors of their lending portfolio that they believe will be significantly impacted by climate change.
    - Most commonly mentioned are sectors such as thermal coal, mining, oil and gas, automotive and transportation. These sectors are exposed specifically to transition risks as they are more reliant on a high carbon economy. Some banks have also mentioned sectors like agriculture and commercial real estate.
- **Climate-related opportunities:** Banks acknowledge that they can play a role to help accelerate the transition to a low-carbon economy through their financing and investing activities.
  - The opportunities identified by the banks are based on their ambition to become a net zero bank, in line with meeting the objectives of the Paris Agreement.
  - Opportunities identified by the banks mainly focus on the following areas.
    - New products and services – e.g. offering green mortgages that offer lower interest rates for customers purchasing homes with an energy performance rating.
    - Sustainable financing to fund green projects – e.g. providing funding to renewable energy projects.
    - Partnerships with other companies to deliver climate solutions – e.g. partnerships with vehicle manufacturers to provide financing options for electric vehicles.
    - Technology and innovation – e.g. digital solutions to support customers in measuring and offsetting their carbon footprint.
    - Supporting customers – e.g. thought leadership and education to help customers to invest responsibly.

Strategy

TCFD Recommended Disclosure

b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy and, financial planning.

% of banks in the Maturity Scale:

We have assessed the Recommended Disclosure as 'moderately advanced' for 60% of banks. These banks have identified the climate-related risks and opportunities which have an impact on their businesses, strategy and financial planning. However there is less clarity on the quantitative impacts of these. As banks finalise their scenario analysis, fully embed their climate-related risks and opportunities into their business activities and enhance their financial planning process, the disclosures in this area are likely to develop further in the coming years – see Page 22 for details.

What have banks disclosed?

- **Progress to date:** Banks acknowledge that they have considered and incorporated climate-related risks and opportunities in their business strategy through their climate ambitions or initiatives – although they have not yet fully embedded these in their business activities or operations.
  - Some banks have disclosed that they will focus on enhancing their measurement capabilities and financial planning process related to climate-related risks and opportunities in their future priorities.
  - Some banks have also acknowledged that their approach to climate-related issues will evolve over time to ensure their strategy is robust and resilient in the longer term, particularly as they progress further with scenario analysis and gain further insights in the climate impacts on their business – see Page 20 for details.
- **Products and services, and operations:** Banks are recognising the impacts of climate change on their business and strategy in the following two key areas:
  - (a) Products and services – Banks have shifted their strategies in the recent years to include a variety of climate-related products and services – banks have disclosed they are offering a range of products such as green bonds, green loans/mortgages, green deposits and sustainable funds.
  - (b) Operations – The climate goals incorporated in the strategy of banks focus on their ambition to achieve net zero in their operations by 2030 (or earlier)[2] – this includes goals around sourcing 100% renewable power across their operations.
- **Supply chain:** Some banks specifically acknowledge that their impact on the environment extends into their supply chain.
  - These banks noted that their supplier policies already incorporate climate considerations – e.g. requirements for suppliers to establish operational practices that minimise impact on the environment.
  - A minority of these banks noted they have calculated and they are monitoring the supply chain emissions from their top suppliers.

[2] *Most banks have set a target to achieve net zero in their operations by 2030 and financed emissions by 2050.*

Strategy

TCFD Recommended Disclosure

c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

% of banks in the Maturity Scale:

We have assessed the Recommended Disclosure as 'more work to do be done' for 56% of the banks in our sample. These banks are still in the process of developing and completing their scenario analysis which means there is limited disclosure on the resilience of their strategies, taking into consideration different climate-related scenarios.

We have assessed the Recommended Disclosure as 'moderately advanced' for 44% of the banks in our sample. Whilst these banks have not yet fully completed their scenario analysis, they have provided detailed disclosures on the results of preliminary testing performed including the impacts on sectors/portfolios tested to date.

What have banks disclosed?

- **Significant steps taken:** Banks disclosed they are taking significant steps to develop scenario analysis capabilities to better understand and act on the implications of climate-related risks and opportunities for their business and customers.
- **Progress made:**
  - Many of the banks are still in the process of completing their scenario analysis. As a result the disclosures around the resilience of a bank's strategy are still preliminary.
  - Some banks disclosed that they have developed their scenario analysis methodology and started testing their methodology to quantify climate-related risks on selected loan portfolios during 2020. Some have also disclosed details of the scenarios they are using.
    - However, a limited number of banks have provided quantitative details of the results or insights gained from the testing performed to date due to a lack of data availability and granularity.
- **Regulatory requirements:** The UK banks disclosed that they are on track to meet the requirements of the Bank of England's 2021 Climate Biennial Exploratory Scenario regulatory stress test that will explore the resilience of the financial system to the physical and transition risks from climate change.
  - As a result, the UK banks appear to be more progressed in their scenario analysis from the disclosures made.

See Pages 36-37 for further details on scenario analysis.

Strategy

The table below provides an overview of how most banks have aligned their climate disclosures on strategy to the TCFD Recommended Disclosures. The table highlights areas where most banks in our sample have provided detailed disclosures and where there are opportunities for further enhancements.

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.	Disclosure of the following: • A description of what banks consider to be the relevant short, medium, and long term time horizons. • Details of the climate-related **risks**, including the following: o A description of the specific climate-related issues for each time horizon that could have a material financial impact on the bank. o A description of the process used to determine which risks could have a material financial impact. o Significant concentrations of credit exposure to carbon-related assets – usually identified by key sectors. o Climate-related risks (transition and physical) in lending and other financial intermediary business activities.	Disclosure of the following: • Further details of the climate-related opportunities, in particular the following: o How the opportunities identified relate to each time horizon (short, medium and long term). o A description of the process used to determine which opportunities could have a material financial impact. *Note: The information provided on climate-related opportunities were lighter compared to the risks (e.g. opportunities identified were often not linked to the time horizon). What is often less clear from the disclosures is where banks see the opportunities in the transition to a low carbon economy over each time horizon – e.g. banks have set targets over sustainable financing, however it is less clear what they identify as the more structural opportunities and competitive advantages in the longer term and how they see themselves seizing these, and the sectors likely to profit from such financing.* • More details of both the risks and opportunities over the short, medium and long term by sector and geography (as relevant). *Note: Some banks have provided details of risks and opportunities by sector, particularly in relation to the associated credit risk in different sectors. Geography details were rarely provided - it may be relevant for banks operating in various geographies to disclose their risks and opportunities by geography, particularly if different jurisdictions impose different costs for organisations (e.g. carbon taxes).*

Strategy

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	Disclosure of the following: • The impact on the businesses and strategy relating to: products and services and operations.	Disclosure of the following: • The impact on the businesses and strategy relating to: supply chain, adaptation and mitigation activities and investment in research and development. o *Although some banks disclosed the impact from supply chain (as noted on Page 19), this was not observed across a majority of the banks.* • How climate-related issues serve as an input to the financial planning process, the time periods used, and how these risks and opportunities are prioritised. o *Banks have identified climate-related risks and opportunities and incorporated these in their strategy (e.g. through products and services). However, they have not yet fully embedded these in their business activities or operations. Banks are also still enhancing their measurement capabilities and financial planning process to consider climate impacts. As a result, the 2020 disclosures in this area are lighter, in particular the quantitative impacts related to their businesses, strategy and financial planning.* o *Additionally, for opportunities, many banks have identified opportunities as noted on Page 18. However, there is often little clarity as to which sectors will profit from these opportunities (in particular sustainable financing) and how these relate to the business strategy in the short, medium and long term.*

Strategy

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Disclosure of the following: • Details of progress to date related to scenario analysis.	Disclosure of the following: • Details of scenario analysis performed including: o Climate-related scenarios used o Associated time horizons considered o Approach used to develop the scenario analysis o Results of the scenario analysis – if the analysis has not been finalised, then results of testing performed (or initial insights gained) • Resilience of the strategy to climate-related risks and opportunities taking into consideration different climate-related scenarios. This includes the following. o Where the strategy may be affected by climate-related risks and opportunities. o How the strategy might change to address such potential risks and opportunities. • Details on how climate-related scenarios interact with scenario analyses conducted in other areas of the business – e.g. details on how the Covid-19 recovery scenarios that are being used for the calculation of expected credit losses interact with the transition scenarios.

Risk management

Recommended Disclosure:	Overall maturity:
a) Describe the organisation's process for identifying and assessing climate-related risks.	
b) Describe the organisation's processes for managing climate-related risks.	
c) Describe how processes for identifying and assessing climate-related risks are integrated into the organisation's overall risk management.	

What is the maturity of climate-related disclosures on risk management?

The climate-related disclosures made by the banks on risk management are relatively advanced when compared to their disclosures in other areas. This is not surprising given banks' traditional focus on and experience with risk management.

Many of the banks clearly indicate that they see climate-related risks as financial risks. Most banks follow the risk categories from the TCFD and divide climate-related risks into either transition risks or physical risks.

It is also clear from the disclosures that climate-related risks are now being embedded in a bank's wider risk management framework.

See further details on Pages 25-28.

Risk management

TCFD Recommended Disclosure

a) Describe the organisation's process for identifying and assessing climate-related risks.

% of banks in the Maturity Scale:

We have assessed the Recommended Disclosure as 'relatively advanced' for 76% of banks in our sample. These banks have provided details of their process for identifying and assessing climate-related risks.

What have banks disclosed?

- **Prioritisation of climate risks:** Banks acknowledge the importance of identifying and assessing climate-related risks. This includes considering the climate-related impacts on their customers as well as the potential impacts on a bank's asset values, operational costs and business strategy.
- **Treatment of climate risk:** Banks acknowledge climate-related risks as financial risks.
  - A majority of the banks have also noted that they are identifying and assessing climate risk as a material or principal risk (or equivalent).
  - Significant progress has been made to integrate climate-related risks into their existing wider risk management frameworks.
- **Risk categories:** Banks have categorised climate-related risks as either of the following.
  - Physical risks – these are risks that arise from the physical effects associated with climate change such as rising temperature, changing weather patterns and extreme weather events.
  - Transition risks – these are risks that may arise from the shift to a low carbon economy.
- **Risk drivers:** Within these two categories, banks have identified a number of risk drivers which they monitor over the short, medium and long term and which are consistent with those identified by the TCFD. The risk drivers for physical risks and transition risks include the following.
  - Physical risks – acute risks and chronic risks[3]
  - Transition risks – regulatory risks, technology risks, legal risks

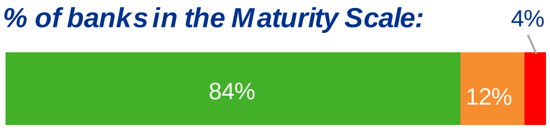
[3] Acute physical risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, or floods. Chronic physical risks refer to longer-term shifts in climate patterns (e.g. sustained higher temperatures) that may cause sea level rise or chronic heat waves.

Risk management

TCFD Recommended Disclosure

b) Describe the organisation's processes for managing climate-related risks.

% of banks in the Maturity Scale:



We have assessed the Recommended Disclosure as 'relatively advanced' for 84% of banks in our sample. These banks disclosed details of their processes for managing climate-related risk.

What have banks disclosed?

- **Overarching risk:** Banks acknowledge climate risk as an overarching risk that impacts other risks, which align with the more traditional risk categories for banking as noted below.

Other risks	Examples of climate impacts as disclosed by the banks
Credit risk	Climate change may result in a loss to a bank from the failure of its customers or counterparties to fully honour their obligations. Climate change may also impact on changes to a bank's processes – e.g. credit risk assessments.
Market risk	There may be potential adverse changes in the value of a bank's assets and liabilities – e.g. the underlying companies which are held as investments by a bank may be impacted by climate change.
Operational risk	A weather event that affects the bank's operations directly or indirectly could cause disruption to operations including customer service.
Liquidity risk	A bank may not be able to efficiently or effectively meet both expected and unexpected current and future cash flows and collateral needs without adversely affecting either its operations or its financial condition.
Reputational risk	A bank's response (or inability to respond) to climate change may result in reputational damage.

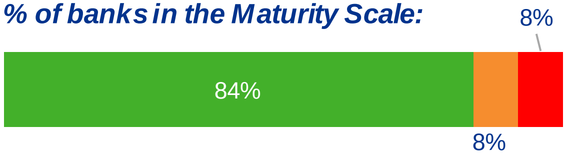
- **Process of managing climate-related risks:** Banks have noted that understanding the potential impact of climate change on these associated risks is an important aspect of managing their climate-related risks – e.g. managing the impacts of climate on credit risk may involve integrating climate considerations in customer credit assessments.
- **Consideration of traditional banking risks:** Many banks have used the more traditional risk categories for banks (as noted above) when managing their climate-related risks. However, although the climate impacts on credit risk have received the most focus in the disclosures, there is less clarity on market or liquidity risks.

Risk management

TCFD Recommended Disclosure

c) Describe how processes for identifying and assessing climate-related risks are integrated into the organisation's overall risk management.

% of banks in the Maturity Scale:



We have assessed the Recommended Disclosure as 'relatively advanced' for 84% of banks in our sample. These banks disclosed details of how their processes for identifying and assessing climate-related risks are integrated into their overall risk management framework.

What have banks disclosed?

- **Risk management framework:** Banks have made significant progress in integrating climate risk into their wider risk management framework.
- **Process involved:** The process of integrating into the overall risk management framework involves the following two key aspects, as disclosed by the banks.
  - (a) Identification of climate risk as a material or principal risk in order to ensure that it receives dedicated focus, including enhanced board and management oversight.
  - (b) Integration of climate-related risks into existing risk types (e.g. credit risk) to ensure climate risk is considered appropriately across all aspects of the business.
- **Evolving process:** Banks acknowledge that their processes for assessing and monitoring climate-related risks will continue to evolve as they embed their approaches further and develop further tools and capabilities over the areas, including scenario analysis.
- **Training:** Some banks disclosed they have introduced dedicated roles within management and created training programs to strengthen their capacity, knowledge and capabilities for managing climate-related risks across their businesses.

Risk management

The table below provides an overview of how most banks have aligned their climate disclosures on risk management to the TCFD Recommended Disclosures. The table highlights areas where most banks in our sample have provided detailed disclosures and where there are opportunities for further enhancements.

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
a) Describe the organisation's process for identifying and assessing climate-related risks.	Disclosure of the following: • Risk management processes for identifying and assessing climate-related risks. • Whether the bank considers regulatory requirements related to climate change as well as other relevant factors. • Climate-related risks in the context of traditional banking industry risk categories such as **credit risk** and **operational risk**.	Disclosure of the following: • How the relative significance of climate-related risks in relation to other risks are determined. • Definitions of risk terminology used or references to existing risk classification frameworks used. • Climate-related risks in the context of traditional banking industry risk categories such as **market risk** and **liquidity risk**.
b) Describe the organisation's processes for managing climate-related risks.	Disclosure of the following: • Processes for managing climate-related risks.	Disclosure of the following: • Processes for prioritising climate-related risks, including how materiality determinations are made within the bank.
c) Describe how processes for identifying and assessing climate-related risks are integrated into the organisation's overall risk management.	Disclosure of the following: • How a bank's processes for identifying, assessing, and managing climate-related risks are integrated into their overall risk management.	None noted.

Metrics and targets

Recommended Disclosure	Overall maturity:
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management processes	
b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks[4]	
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	

What is the maturity of climate-related disclosures on metrics and targets?

Banks have disclosed key metrics and targets that they are currently using and developing to measure and manage climate-related risks and opportunities. These generally relate to sustainable financing, operational emissions and financed emissions. Quantitative metrics and targets are disclosed on the first two, and most banks are still in the process of quantifying their financed emissions (which fall within category 15 of the GHG Protocol) and are considered a key metric for banks.

For financed emissions, although most banks have set a net zero target for 2050 that includes financed emissions, it is not yet clear in the disclosures how these emissions will be measured (or how these can be measured). Currently, there is no universally accepted methodology for calculating financed emissions. Accordingly, we have assessed the maturity of all three recommended disclosures related to the metrics and targets as 'moderately advanced'.

See further details on Pages 30-35.

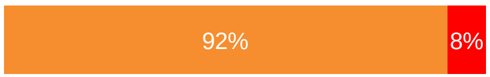
[4] **Scope 1** refers to all direct GHG emissions. **Scope 2** refers to indirect GHG emissions from consumption of purchased electricity, heat, or steam. **Scope 3** refers to other indirect emissions not covered in Scope 2 that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Metrics and targets

TCFD Recommended Disclosure

a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with strategy and risk management processes

***% of banks in the Maturity Scale*:**



We have assessed the Recommended Disclosure as 'moderately advanced' for 92% of banks in our sample. These banks disclosed details of the metrics used to measure operational emissions and sustainable financing, including quantitative amounts. However, these banks are still in the process of estimating their financed emissions and they have not yet disclosed quantitative amounts related to financed emissions (or they have disclosed preliminary estimates of financed emissions for specific sectors).

What have banks disclosed?

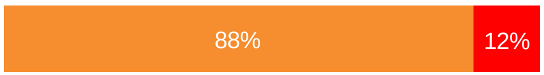
- **Identification of key metrics:** Banks have identified the key metrics used to measure and manage climate-related risks and opportunities. These generally relate to three common areas: sustainable financing, operational emissions and financed emissions. Common metrics identified by banks in 2020 are noted on Page 33.
- **Financed emissions:** A number of banks disclosed they are still refining their approaches and capabilities to estimate and track financed emissions, including carbon intensity for specific portfolios.
- **Quantification of certain metrics:**
  - Most banks have identified metrics for sustainable financing and operational emissions and also disclosed relevant quantitative amounts for these.
  - However, for financed emissions, although most banks have set a target to reduce their financed emissions, they have not yet disclosed quantitative details of their financed emissions, including metrics and progress to date on financed emission targets.
    - A minority of banks disclosed quantitative details of their preliminary estimates for financed emissions in certain sectors and provided details on how they have estimated their financed emissions. Some of these banks disclosed that a combination of methodologies have been used to make such estimates, including the use of publicly available data and extrapolated data.
    - Further, some banks have disclosed quantitative metrics of their credit exposures in certain sectors subject to climate risk.

Metrics and targets

TCFD Recommended Disclosure

b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks

% of banks in the Maturity Scale:



We have assessed the Recommended Disclosure as ‘moderately advanced’ for 88% of banks in our sample. These banks disclosed their GHG emissions in Scope 1 and Scope 2. However, they have not yet disclosed quantitative amounts of their financed emissions which is an important component of GHG emissions in Scope 3 for banks.

What have banks disclosed?

- **GHG emissions for Scope 1, Scope 2 and Scope 3:** To measure and manage carbon emissions, many banks have identified the types of GHG emissions included in Scope 1, Scope 2 and Scope 3 in line with the GHG Protocol.
  - Most banks have disclosed quantitative details of their GHG emission for Scope 1, Scope 2 and some Scope 3 emissions (mainly for business travel).
  - The common types of emissions identified by banks in their 2020 disclosures are noted in the table below.
  - However, they have not disclosed quantitative details of their GHG emissions for financed emissions (which fall within category 15 of the GHG protocol for Scope 3). Many of the banks disclosed they are still in the process of estimating their financed emissions and a minority of banks included their preliminary estimates of financed emissions.

Scope	Types of emissions identified by banks
Scope 1	The direct emissions created by the bank – e.g. emissions from company facilities and company vehicles.
Scope 2	The indirect emissions resulting from the use of electricity and energy to run the business – e.g. emissions from electricity, heating and cooling.
Scope 3	The indirect emissions attributed to upstream and downstream activities of a bank taking place to provide services to customers. o The upstream activities included are business travel and emissions from the supply chain including transport, distribution and waste. o The downstream activities included are those related to investments and financed emissions.

- **Covid-19 impacts:** Some banks disclosed that their travel emissions fell in 2020 due to Covid-19 (which is included in Scope 3), and they will continue to encourage the use of technological solutions where possible to provide connectivity with colleagues and customers going forward.

Metrics and targets

TCFD Recommended Disclosure

b) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets

% of banks in the Maturity Scale:

100%

We have assessed the Recommended Disclosure as 'moderately advanced' for 100% of banks in our sample. All the banks have identified targets and quantified amounts to manage sustainable financing and operational emissions, including details of their performance against targets. However for financed emissions, whilst many of the banks have identified targets related to financed emissions, they are still in the process of quantifying financed emissions that would allow them to track their performance against these targets.

What have banks disclosed?

- **Identification of key targets:** Banks have identified the targets used to manage climate-related risks and opportunities. Similar to the metrics, the targets identified relate to three common areas: sustainable financing, operational emissions and financed emissions. Common targets used by banks in 2020 are noted on Page 33.
  - Banks have committed to providing significant amounts of sustainable financing in the coming years, with target amounts ranging from a few billions to 1 trillion by 2030 (or earlier).
  - Most banks have set a target to reduce their operational emissions to net zero by 2030 (or earlier). The two common areas where banks have disclosed specific metrics and targets relate to carbon emissions and energy consumption from their operations.
  - The majority of banks have set a target to reduce their financed emissions to net zero by 2050 (or earlier). Some banks have also set specific targets to reduce their financing to sectors such as power, energy and oil and gas, or fully phase-out their lending to carbon intensive sectors such as thermal coal.
- **Progress to date for certain targets:**
  - Most banks have identified targets for sustainable financing and operational emissions and also disclosed relevant quantitative amounts related to their performance against these targets.
  - For financed emissions, although most banks have disclosed targets to reduce financed emissions, they are still in the process of quantifying these emissions. A minority of banks disclosed preliminary estimates of financed emissions – however final quantitative amounts have not been disclosed to assess their performance against the set targets.

Metrics and targets

Common metrics and targets:

The table below outlines the common metrics and targets identified and disclosed by banks in 2020. These relate to three common areas: sustainable financing, operational emissions and financed emissions.

Area:	Common metrics:	Common targets:
Sustainable financing: refers to funding committed to projects, businesses and products that provides environmental benefits (e.g. development of renewable energy sources).	• Amount of sustainable financing provided in 2020 and/or to date • Amount of green financing provided in 2020 and/or to date • Number of deals and amount of financing for key product types in 2020 (e.g. green bonds)	• Provide $X of sustainable finance by 2030
Operational emissions: refers to emissions related to a bank's own operations such as carbon emissions and energy consumption.	• CO2 emissions per FTE across Scope 1, 2 and 3 • Absolute CO2 emissions across Scope 1, 2 and 3 • Percentage of renewable electricity sourced • Energy consumption (kWh) • Waste generated (t) • Paper used (t) • Water consumption (m3).	• Target to reduce annual greenhouse gas emissions to net zero by 2030 • Reduce annual office paper use by X% to 10kg/FTE/year • Reduce waste per colleague to Xkg/FTE/year • Reduce X% of waste annually
Financed emissions: refers to absolute GHG emissions that banks finance through their lending and investment activity.	• Percentage of loans in carbon-intensive sectors • Total amount of lending to customers in carbon-intensive sectors • Total sector exposures as % of total assets. • Financed emissions (MtCo2e/y) – *preliminary estimates of quantitative amounts provided in 2020 by a minority of banks*.	• Target to reduce power portfolio emissions intensity by X% by a 2050 • Target to reduce energy portfolio absolute emissions by X% by 2050 • Target to reduce the level of carbon intensity for the equity component of the banks' funds and portfolios by X% by 2050 • Full phase-out from coal by 2030 • Target to reduce X% of financing to upstream oil and gas by 2040 compared with 2019 levels

Metrics and targets

The table below provides an overview of how most banks have aligned their climate disclosures on metrics and targets to the TCFD Recommended Disclosures. The table highlights areas where most banks in our sample have provided detailed disclosures and where there are opportunities for further enhancements.

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management processes	Disclosure of the following areas: • Specific metrics identified over sustainable financing, operational emissions and financed emissions. • Quantitative details related to the metrics for sustainable financing and operational emissions in 2020.	Disclosure of the following areas: • Whether and how related performance metrics are incorporated into remuneration policies. o *From our review of the Remuneration Reports included with the 2020 Annual Financial Reports, it was noted that some banks have already started considering the impact of climate change on the remuneration structures of their senior management. However, these have not been reflected in the TCFD disclosures related to the metrics.* • Internal carbon prices and climate-related opportunity metrics such as revenue from related products and services. • Metrics for historical periods to allow for trend analysis. o *Often metrics have been provided for 2020, and in some cases for 2019.* • Description of the methodologies used to calculate or estimate climate-related metrics. • Metrics related to equity and debt holdings or trading positions. • Amount and percentage of carbon-related assets relative to total assets and amount of lending and other financing connected with climate-related opportunities. o *Some banks provided all or some aspects of these quantitative details but not all banks provide these.*
b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions, and the related risks	Disclosure of the following areas: • Qualitative details of the types of emissions included in Scope 1, 2 and 3. • Quantitative details of emissions in Scope 1 and 2.	Disclosure of the following areas: • Quantitative details of financed emissions (which is included in Scope 3).

Metrics and targets

TCFD Recommended Disclosure	Where do banks provide detailed disclosures?	Where are there opportunities for further enhancements?
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	Disclosure of the following areas: • Specific targets identified for sustainable financing, operational emissions and financed emissions, including time frames. • Quantitative details for progress to date on achieving the targets related to sustainable financing and operational emissions in 2020.	Disclosure of the following: • Quantitative details for progress to date on achieving the targets related to financed emissions in relevant sectors. o Alternatively provide preliminary estimates of financed emissions where this is available.

Scenario Analysis

What is scenario analysis?

- Organisations may be affected by climate-related risks today. However, the most significant effects of climate change are likely to emerge over the medium to longer term and their timing and magnitude are uncertain.
- In order for organisations to understand the potential effects of climate change on their businesses, strategies, and financial performance and to appropriately incorporate the potential effects in their planning processes, organisations need to consider how their climate-related risks and opportunities may evolve and the potential implications under different conditions. **One way to do this is through scenario analysis.**
- Scenario analysis is a tool for understanding and measuring strategic implications of climate-related risks and opportunities. The purpose of scenario analysis is not to forecast the future but to understand and prepare to manage climate-related risks that could arise.
- Scenario analysis forms a key part of the TCFD Recommendations related to strategy - see Page 20.

Progress to date by banks:

- While the banks in our sample have embedded the climate-related risks in their risk management frameworks and governance structures, many are not yet as far when it comes to climate-related scenario analysis.
- Most of the banks are in the process of developing and setting up scenario analysis.
  - ❖ A number of the banks disclosed that they have developed their methodology related to scenario analysis and started testing their methodology to quantify the potential climate impacts on selected loan portfolios.
  - ❖ Some banks have disclosed the scenarios that they are using (see Page 37) and a few of the banks have disclosed results (or insights) of testing they have performed to date.
  - ❖ Some banks have carried out this analysis in partnership with a third-party expert while others have used their own models to understand the implications of different climate scenarios on their business.
  - ❖ Some banks acknowledge that data availability and granularity are holding back meaningful analysis at this point in time.
- All the UK banks included in our sample disclosed they plan to execute the Bank of England's Climate Biennial Exploratory Scenario in 2021. From the disclosures made, the UK banks appear to be more progressed in their scenario analysis than their peers.
- Overall, climate scenario analysis is still an evolving area in the banking industry, where we are yet to see the full results of such analysis. It is certainly an area to watch in the coming years as banks develop and refine their methodologies and capabilities in this area.

Scenario Analysis

Key observations from those banks that have progressed further on their scenario analysis:

- **Scenarios used:** Amongst those banks that provided information on scenario analysis, 43% stated they used scenarios published by the Network of Central Banks and Supervisors for Greening the Financial System ('NGFS'). Of these banks, most used a three scenario approach utilising the following scenarios from the NGFS:
  1. **Orderly:** assumes climate policies are introduced early and become gradually more stringent. Net zero CO_2 emissions are achieved before 2070, giving a 67% chance of limiting global warming to below 2°C. Physical and transition risks are both relatively low.
  2. **Disorderly:** assumes climate policies are not introduced until 2030. Since actions are taken relatively late and limited by available technologies, emissions reductions need to be sharper than in the Orderly scenario to limit warming to the same target. The result is higher transition risk.
  3. **Hot House World:** assumes that only currently implemented policies are preserved. Nationally Determined Contributions are not met. Emissions grow until 2080 leading to 3°C+ of warming and severe physical risks. This includes irreversible changes like higher sea level rise.
- **Other scenarios used:** Where banks did not use the NGFS scenarios, some used other external scenarios – e.g. some of the European banks in our sample used the Sustainable Development Scenario published by the International Energy Agency.
- **Transition risk:** Most banks selected specific sectors in their wholesale lending portfolio to perform their scenario analysis. The sectors selected are generally those considered most sensitive to climate-related risks.
- **Physical risk:** Most banks performed scenario analysis over a portion of their retail mortgage portfolios to measure the potential impacts of physical risk from climate change.
- **Period modelled:** Some banks noted they have modelled their climate-related scenarios for the period 2020-2050.
- **Approach used:** Some banks disclosed they have translated each scenario into economic impacts for their wholesale and retail customers, taking both physical and transition risks into account.
- **Complexity involved:** Some banks disclosed that modelling of climate change is inherently complex and relies on assumptions and parameters that are subject to uncertainty.

Appendices

Appendix 1: What are the TCFD Recommendations?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Governance: Disclose the organisation's governance around climate-related risks and opportunities.

TCFD Recommended Disclosures	TCFD Guidance for all sectors	TCFD Supplemental Guidance for banks
(a) Describe the board's oversight of climate-related risks and opportunities.	• Process and frequency by which the board and/or board committees (e.g. audit, risk, or other committees) are informed by climate-related issues. • Whether the board and/or board committees consider climate-related issues when reviewing and guiding strategy, major plans of action, risk management policies, annual budgets, and business plans as well as setting the organisation's performance objectives, monitoring implementation and performance and overseeing major capital expenditure, acquisition and divestitures. • How the board monitors and oversees progress against goals and targets for addressing climate-related issues.	No Supplemental Guidance for banks.
(b) Describe management's role in assessing and managing climate-related risks and opportunities.	• Whether the organisation has assigned climate-related responsibilities to management-level positions or committees; and, if so, whether such management positions or committees report to the board or a committee of the board and whether those responsibilities include assessing and/or managing climate-related issues. • A description of the associated organisation structure(s). • Processes by which management is informed about climate-related issues. • How management (through specific positions and/or management committees) monitors climate-related issues.	No Supplemental Guidance for banks.

Appendix 1: What are the TCFD Recommendations (continued)?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.

TCFD Recommended Disclosures	TCFD Guidance for all sectors	TCFD Supplemental Guidance for banks
(a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium and long term.	• A description of what they consider to be the relevant short-, medium-, and long-term horizons, taking into consideration the useful life of the organisation's assets or infrastructure and the fact that climate-related issues often manifest themselves over the medium and longer terms.	• Banks should describe significant concentrations of credit exposures to carbon-related assets. • Additionally, banks should consider disclosing their climate-related risks (transition and physical) in their lending and other financial intermediary business activities.
	• A description of the specific climate-related issues for each time horizon (short, medium and long term) that could have a material impact on the organisation.	
	• A description of the process(es) used to determine which risks and opportunities could have a material financial impact on the organisation.	
	Note: Organisations should consider providing a description of their risks and opportunities by sector and/or geography, as appropriate.	

(b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	• Organisations should consider including the impact on their businesses and strategy in the following areas:
	  • Products and services
	  • Supply chain and/or value chain
	  • Adaptation and mitigation activities
	  • Investment in research and development
	  • Operations (including types of operations and location of facilities)
		No Supplemental Guidance for banks.

Appendix 1: What are the TCFD Recommendations (continued)?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy and financial planning where such information is material.

TCFD Recommended Disclosures	TCFD Guidance for all sectors	TCFD Supplemental Guidance for banks
(b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning ***(continued from Page 40)***.	• Organisations should describe how climate-related issues serve as an input to their financial planning process, the time period(s) used and how these risks and opportunities are prioritised. Organisations' disclosures should reflect their ability to create value over time. Organisations should also consider including in their disclosures the impact on financial planning in the following areas: • Operating costs and revenues • Capital expenditures and capital allocation • Acquisitions or divestments • Access to capital • If climate-related scenarios were used to inform the organisation's strategy and financial planning, such scenarios should be described.	No Supplemental Guidance for banks.
(c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	• Organisations should describe how resilient their strategies are to climate-related risks and opportunities, taking into consideration a transition to a lower-carbon economy consistent with a 2°C or lower scenario and, where relevant to the organization, scenarios consistent with increased physical climate-related risks. • Organisations should consider discussing: • where they believe their strategies may be affected by climate-related risks and opportunities; • how their strategies might change to address such potential risks and opportunities; and • the climate-related scenarios and associated time horizon(s) considered.	No Supplemental Guidance for banks.

Appendix 1: What are the TCFD Recommendations (continued)?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Risk Management: Disclose how the organisation identifies, assesses, and manages climate-related risks.

TCFD Recommended Disclosures	TCFD Guidance for all sectors	TCFD Supplemental Guidance for banks

(a) Describe the organisation's processes for identifying and assessing climate-related risks.	• Organisations should describe their risk management processes for identifying and assessing climate-related risks. An important aspect of this description is how organisations determine the relative significance of climate-related risks in relation to other risks.
	• Organisations should describe whether they consider existing and emerging regulatory requirements related to climate change (e.g. limits on emissions) as well as other relevant factors considered.
	• Organisations should also consider disclosing the following:
	  • processes for assessing the potential size and scope of identified climate-related risks; and
	  • definitions of risk terminology used or references to existing risk classification frameworks used.
		• Banks should consider characterising their climate-related risks in the context of traditional banking industry risk categories such as credit risk, market risk, liquidity risk and operational risk.
		• Banks should also consider describing any risk classification frameworks used.

(b) Describe the organisation's processes for managing climate-related risks.	• Organisations should describe their processes for managing climate-related risks, including how they make decisions to mitigate, transfer, accept, or control those risks. • In addition, organisations should describe their processes for prioritising climate-related risks, including how materiality determinations are made within their organisations.	No Supplemental Guidance for banks.
(c) Describe how processes for identifying and assessing climate-related risks are integrated into the organisation's overall risk management.	• Organisations should describe how their processes for identifying, assessing, and managing climate-related risks are integrated into their overall risk management.	No Supplemental Guidance for banks.

Appendix 1: What are the TCFD Recommendations (continued)?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

<table>
<tr><th>TCFD Recommended Disclosures</th><th>TCFD Guidance for all sectors</th><th>TCFD Supplemental Guidance for banks</th></tr>
<tr><td rowspan="5">(a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.</td><td>• Organisations should provide the key metrics used to measure and manage climate-related risks and opportunities.</td><td rowspan="5">• Banks should provide the metrics used to assess the impact of (transition and physical) climate-related risks on their lending and other financial intermediary business activities in the short, medium, and long term. Metrics provided may relate to credit exposure, equity and debt holdings, or trading positions, broken down by:
◦ Industry
◦ Geography
◦ Credit quality (e.g. investment grade or non-investment grade, internal rating system)
◦ Average tenor

• Banks should also provide the amount and percentage of carbon-related assets relative to total assets as well as the amount of lending and other financing connected with climate-related opportunities.</td></tr>
<tr><td>• Organisations should consider including metrics on climate-related risks associated with water, energy, land use, and waste management where relevant and applicable.</td></tr>
<tr><td>• Where climate-related issues are material, organisations should consider describing whether and how related performance metrics are incorporated into remuneration policies.</td></tr>
<tr><td>• Where relevant, organisations should provide their internal carbon price as well as climate-related opportunity metrics such as revenue from products and services designed for a lower-carbon economy.</td></tr>
<tr><td>• Metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organisations should provide a description of the methodologies used to calculate or estimate climate-related metrics.</td></tr>
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Appendix 1: What are the TCFD Recommendations (continued)?

This Appendix outlines the 11 TCFD Recommended Disclosures, the Guidance and the Supplemental Guidance for banks across the 4 thematic areas.

Metrics and Targets: Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.

TCFD Recommended Disclosures	TCFD Guidance for all sectors	TCFD Supplemental Guidance for banks
(b) Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	• Organisations should provide their Scope 1 and Scope 2 GHG emissions and, if appropriate, Scope 3 GHG emissions and the related risks. • GHG emissions should be calculated in line with the GHG Protocol methodology to allow for aggregation and comparability across organisations and jurisdictions. As appropriate, organisations should consider providing related, generally accepted, industry-specific GHG efficiency ratios. • GHG emissions and associated metrics should be provided for historical periods to allow for trend analysis. In addition, where not apparent, organisations should provide a description of the methodologies used to calculate or estimate the metrics.	No Supplemental Guidance for banks.

(c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets	• Organisations should describe their key climate-related targets such as those related to GHG emissions, water usage, energy usage, etc. in line with anticipated regulatory requirements or market constraints or other goals. Other goals may include efficiency or financial goals, financial loss tolerances, avoided GHG emissions through the entire product life cycle, or net revenue goals for products and services designed for a lower carbon economy. In describing their targets organisations should consider including the following:
	  • whether the target is absolute or intensity based;
	  • time frames over which the target applies;
	  • base year from which progress is measured; and
	  • key performance indicators used to assess progress against targets.
		No Supplemental Guidance for banks.

Appendix 2: Maturity scale

We have used a Maturity Scale to benchmark the climate disclosures of the banks with respect to the TCFD Recommended Disclosures. The Maturity Scale consists of three levels – as shown in the table below.

When assessing the climate disclosures of banks within the Maturity Scale, we assessed the relative maturity of disclosures made by a bank with respect to each TCFD Recommended Disclosure. In making this assessment, we considered the following.

1. ***Comparison between banks:*** How the disclosures related to the TCFD Recommendation made by a bank compares to those disclosures of other banks in our sample.
2. ***Comparison with the TCFD Guidance and Supplemental Guidance for banks:*** How the disclosures related to the TCFD Recommended Disclosure made by a bank compares with the TCFD Guidance and the Supplemental Guidance for banks with respect to the TCFD Recommendation (see Appendix 1).
3. ***Comparison between the TCFD Recommendations:*** How the disclosures related to the TCFD Recommendation made by a bank compares to the disclosures made in other TCFD Recommended Disclosures across the thematic areas in terms of the nature and extent of information disclosed – e.g. TCFD-aligned disclosures in governance compared to those in strategy.

In this report, we have assigned an **overall maturity level** to each TCFD Recommended Disclosure and also shown **the percentage of banks** which had disclosures in each level of the Maturity Scale. The 'overall maturity' is based on the percentages of banks which had disclosures in each level of maturity within the Maturity Scale and it is an indication of where we have assessed majority of the banks in our sample within the Maturity Scale.

It is important to note that we have exercised a certain level of **judgement** when assessing the disclosures of the banks in our sample and applying the Maturity Scale.

The table below outlines the key criteria we used when assessing the disclosures within the three levels in the Maturity Scale.

Maturity Scale:	Key criteria used when assessing the disclosures by a bank with respect to each TCFD Recommended Disclosure:
Disclosures are relatively advanced	• Disclosures made by a bank consider all aspects of the TCFD Recommended Disclosures as well as key aspects of the TCFD Guidance and the Supplemental Guidance for banks. • Disclosures are relatively more advanced compared to other TCFD Recommended Disclosures.
Disclosures are moderately advanced	• Disclosures made by a bank cover some (but not all) aspects of the TCFD Recommended Disclosures. • Disclosures consider some (but not all) key aspects of the TCFD Guidance and the Supplemental Guidance for banks. • Disclosures are moderately advanced compared to other TCFD Recommended Disclosures.
More work to be done on the disclosures	• Disclosures made by a bank cover limited aspects of the TCFD Recommended Disclosures. • Disclosures consider limited aspects of the TCFD Guidance and the Supplemental Guidance for banks. • Disclosures may benefit from further enhancements compared to other TCFD Recommended Disclosures.