



# FINANCE INITIATIVE

**TCFD Phase II  
Asia Regional Webinar  
February 2020**



# Agenda for the day

## Q&A welcome after each topic

8:00 CET

Context setting: Introduction to the UNEP-FI TCFD program

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8:20 CET

Japan's climate risks

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8:40 CET

Overview of bank approaches to climate risk analysis

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9:10 CET

Upcoming developments from the TCFD and NGFS

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9:20 CET

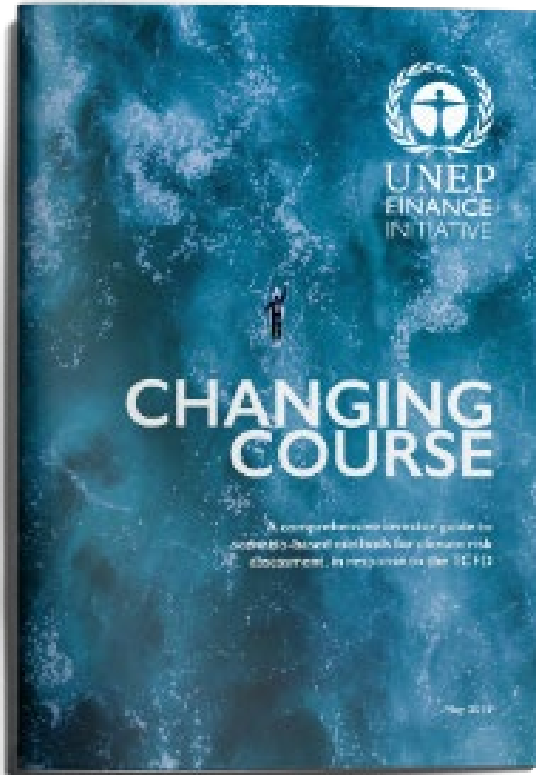
Global trends in climate risk regulation

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1 | Context setting: UNEP-FI

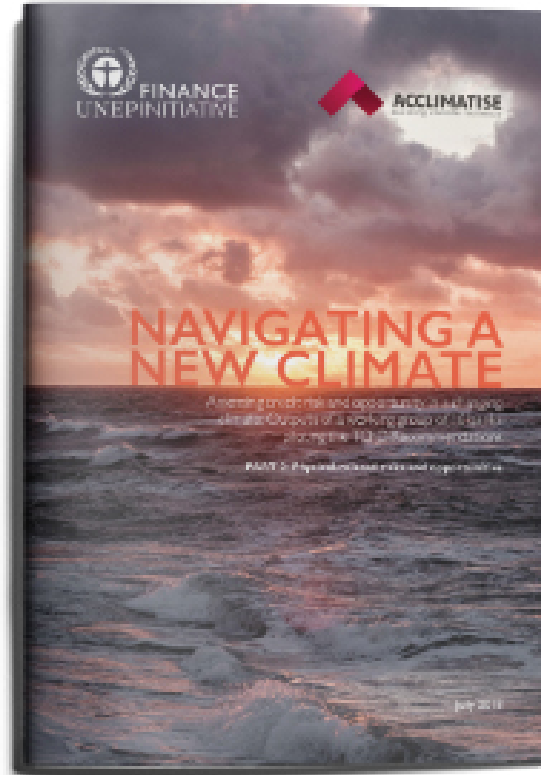
# UNEP-FI's latest TCFD publications

## Investors



**CARBON DELTA**  
the environmental fintech

## Banking Physical risk



**ACCLIMATISE**  
building climate resilience

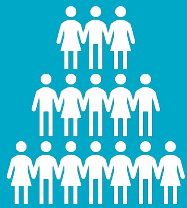
## Banking Transition risk



 **OLIVER WYMAN**

# TCFD Phase II for banks

Building on the success of Phase I by providing the 39 Phase II banks with additional tools and knowledge to assess their climate risks



## Workstream I: Clinics

- Introduce Phase II participants to the methodologies developed in Phase I for physical and transition risk
- Hold bilateral consultations with Phase I banks about their experiences
- Develop the curriculum plan for Phase II



## Workstream II: Enhancing the toolkit

- Explore the universe of climate scenarios and their key assumptions
- Implement the Phase I methodology and develop best practices for assessment across sectors
- Provide guidance around disclosure and an effective climate risk program



## Workstream III: Creating the hub

- Develop an online hub to provide resources and guidance to the industry
- Create a portal where Phase II participants can view the deliverables produced by the program

In Progress

# Workstream II curriculum: Enhancing the toolkit

## Core modules

### Modules and objectives



#### Climate scenarios

- Banks understand the full spectrum of climate scenarios
- Banks understand the differences and key assumptions
- Banks understand how to use scenarios to assess risks and opportunities
- Banks identify relevant internal and comparable reference scenarios



#### Data and methodology

- Banks understand availability of climate relevant asset-level data
- Advance and refine Phase 1 methodologies for risk and opportunity assessment
- Create a comprehensive risk taxonomy across sectors and geographies
- Banks agree on best-practices around sector/geographical assessments










#### Reporting and governance

- Banks understand expectations around TCFD disclosures
- Develop approaches to standardize disclosures
- Banks understand how to create an internal climate risk program
- Banks can begin to draft their own TCFD disclosures





## Deliverables for TCFD Phase II

Objectives include: understanding climate scenarios, assessing different data sources, and building strong climate risk governance practices

### Transition risk deliverables

Activities	Program outputs
Training on new transition risk webtool	
Draft working paper on the current transition risk scenario universe	
Create transition risk heatmap for relevant sectors	
Draft working paper on sector assessment practices	
Create standardized disclosure template	
Draft working paper on climate risk governance practices	
Develop UNEP-FI TCFD and climate risk hub	

### Physical risk deliverables

Activities	Program outputs
Support with bank-specific correlation analysis	
Further exploration of physical risk opportunities	
Blueprint on best-practices in assessing physical risk	
Creation of UNEP-FI hub	

## 2 | Japan's climate risks



# Climate risks in Japan (1/2)

In 2018, Japan topped the Global Climate Risk Index issued by Germanwatch<sup>1</sup>

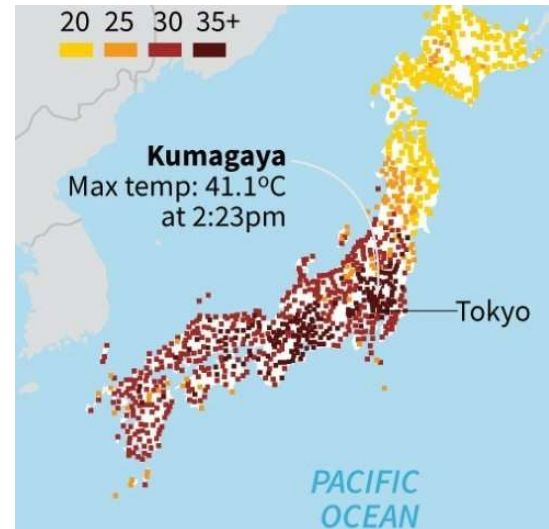
## Heavy rains and mudslides, July 2018

- >200 mm of rain per day
- Over 200 people died due to flash floods and mudslides
- 2.3 million people had to be evacuated
- \$7BN in total damage



## Heatwave, August 2018

- 138 people died from the heatwave
- More than 70,000 people required hospitalization due to heat strokes and heat exhaustion
- New national temperature records set



## Typhoon Jebi, September 2018

- Over \$12.6 in total economic damage from the storm
- Record windspeeds measured at multiple locations
- Thousands stranded as transit lines were cut



# Climate risks in Japan (2/2)

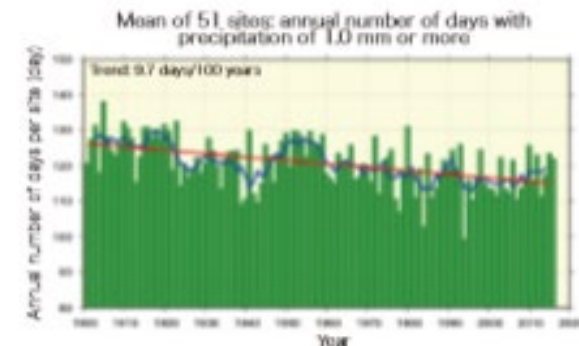
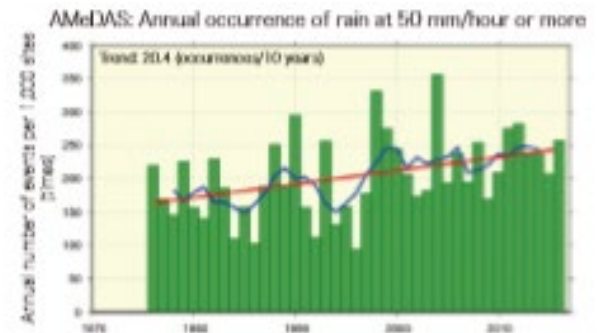
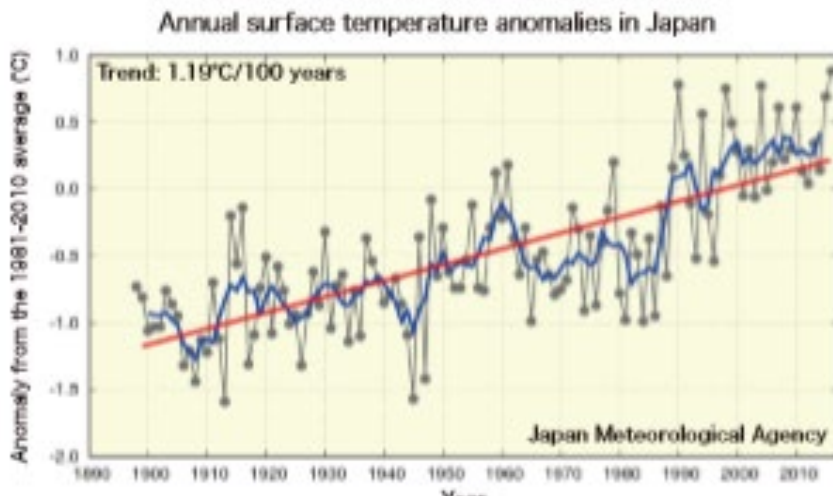
Japan is likely to face disproportionate impacts from climate change according to climatologists

## Faster rise in temperatures<sup>1,2</sup>

- Japan has warmed more rapidly over the past century than average
- Under RCP 8.5 Japan's temperature is expected to increase by 3.4-5.4 °C vs 2.6-4.8°C globally by 2100
- Heatwaves and days above 35°C are expected to grow more frequent in all IPCC scenarios

## More flooding<sup>1,2</sup>

- Expectation that extreme precipitation will increase under all IPCC scenarios, with the greatest rise in RCP 8.5
- However, total days of rain will fall on average, potentially threatening agricultural production and reservoir supplies



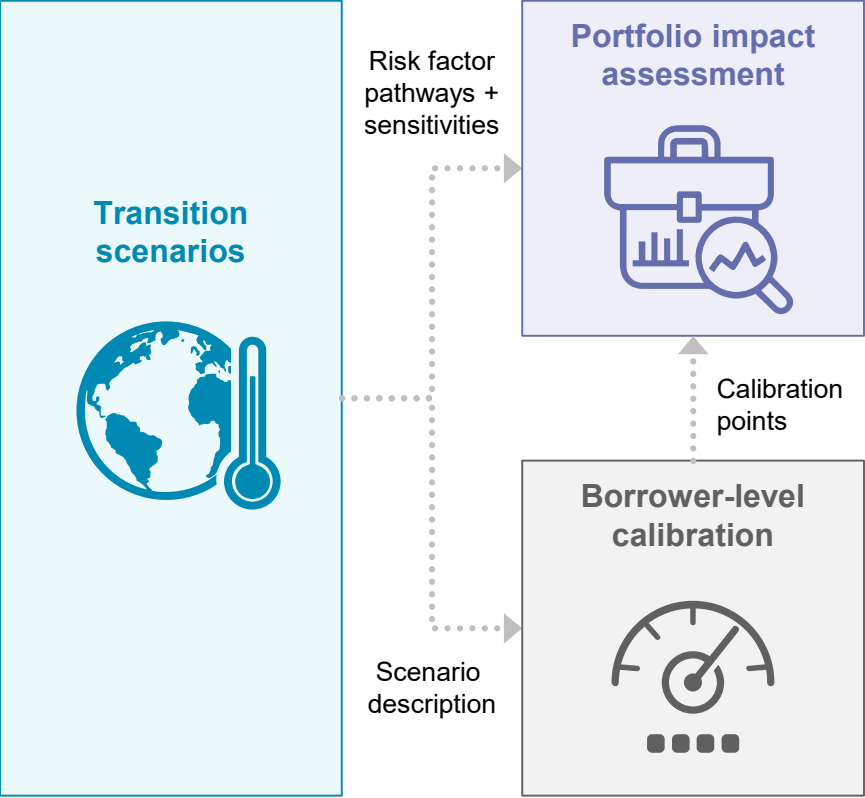
1. Japan Meteorological Agency  
2. IPCC


## 3 | Approaches to climate risk analysis


# UNEP-FI transition risk framework




## Overview of the transition risk framework



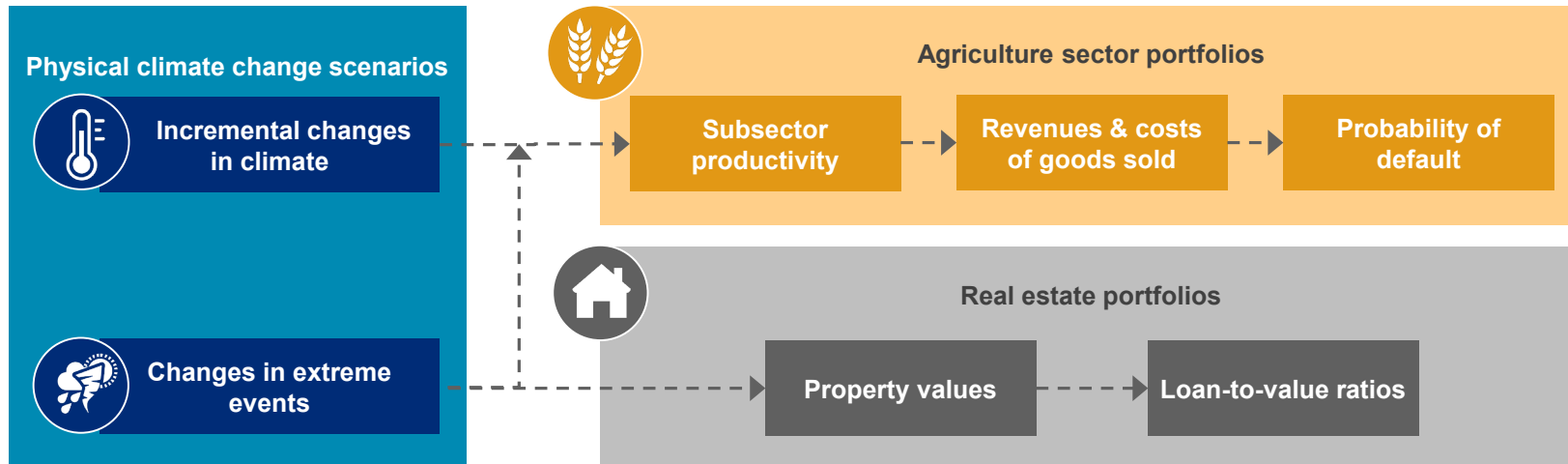
 **Transition scenarios** describe an evolving economic environment in a consistent manner across time, sectors, and geographies. Scenarios provide detailed outputs to define sector-level exposure to transition impacts.

 **Borrower-level calibration** addresses the lack of empirical data on corporate exposure to transition risk by using industry experts to estimate the scenario's impact on individual borrowers. Calibration specifies the relationship between economic scenarios and credit outcomes.

 **Portfolio impact assessment** uses a systematic and repeatable approach to extrapolate the risk assessed by the other modules to the remainder of the portfolio.

# UNEP-FI physical risk framework

## Overview of the physical risk framework



### Agriculture

1. Select representative sample of borrowers to assess
2. Identify climate change impacts on subsector productivity, price, downtime
3. Assess implications for borrowers' finances: changes in revenue & costs of goods sold
4. Estimate changes in probability of default: stress the factors/ratios in banks' internal credit rating models that have revenue and cost components
5. Extrapolate findings to whole portfolio subsector



### Real estate

1. Identify properties facing risk of extreme events using existing online risk assessment platforms
2. Estimate probabilities of properties encountering extreme events in future
3. Assess potential changes in property values for 'at risk' properties
4. Calculate revised loan-to-value ratios

# Additional assessment approaches

## Some institutions are pursuing modified or alternative forms of assessment

### Modeling approaches

- Use insurance data to provide a granular view of assets and historical losses experienced by physical events
- Use geospatial mapping software and overlay climate scientist simulations of various extreme events
- Link damages to microeconomic and macroeconomic factors as in traditional stress testing
  - Consider primary effects
  - Consider secondary effects
- Consider degree of alignment with various climate objectives at the portfolio or industry level

### Scorecard approaches

- Create an internal heatmap or rely on a third-party heatmap to identify areas of highest risk within the portfolio
- Develop a specific assessment that combines elements of credit risk, project risk, and climate risk into a screening tool
- Set a rules-based framework for assessing different assets across industries and locations

# Perspectives on climate scenario analysis

## Insights shared during the UNEP-FI London regional session

### Physical risk

#### Challenges

- Obtaining sufficiently precise data
  - On impacts from extreme weather events
  - On locations of physical assets (non-RE)
- Limitations in existing insurance data
- High degree of uncertainty around the impacts of forecasts on specific geographies

#### Other views

- Interest in better understanding incremental risks
- Interest in determining interaction effects between hazards and primary and secondary impacts

### Transition risk

#### Challenges

- Outcomes are highly dependent on the underlying scenarios
  - In Phase I even the most “severe” scenarios appeared to have relatively mild impacts
  - Long time-horizons for impacts either moderated their effects or made them less relevant for decision-makers
- Linking scenario outputs to ratings for borrower assessment may require additional data

#### Other views

- Interest in better understanding the core assumptions of the various scenarios
- Interest in comparing outputs from a variety of scenarios

### General ideas

- Important to have transparency in the calculations and assumptions within scenario analysis
- Need to create processes to:
  - Obtain climate-relevant data from borrowers
  - Produce aggregated assessments that meet regulatory demands
- Desire to integrate physical and transition risk outputs

## 4 | TCFD and NGFS updates



# The TCFD and the NGFS

Both organizations added members in 2019 and are poised to release new materials and guidance in 2020

## TCFD

### 2019 updates

Currently over 1000 supporters of the TCFS

Best practice handbook released

Second status report key conclusions

- Disclosure of climate-related financial information has increased, but is still insufficient for investors.
- Mainstreaming climate-related issues requires the involvement of multiple business functions.
- A majority of companies using scenarios do not disclose information on their own resiliency
- Greater clarity is needed on potential financial impacts of climate-related issues on companies

### 2020 plans

Now mandatory for PRI signatories

Likely to be mandatory in multiple jurisdictions

Potential additional focus on alignment

Guidance to come on climate scenario analysis from advisory group

## NGFS

### 2019 updates

Currently 54 members and 12 observers

Reports issued

- “A call for action” which includes six recommendations for much regulatory action on climate change
- Technical report on implications of climate change on macroeconomic and financial stability
- A sustainable and responsible investment guide for central banks’ portfolio management

### 2020 plans

Plenary meeting in April 2020

Proposed publications for H1 2020

- Reference transition scenarios and guidelines on scenario-based climate risk analysis
- Current environmental risk assessment methodologies
- Guide on integrating climate and environmental risk into supervision

# TCFD recommended disclosures

Presently, average companies are only disclosing between 3 and 4 of the recommended disclosures

## 11 recommended disclosures

Governance	Strategy	Risk Management	Metrics & Targets
Disclose the organisation's governance around climate-related risks and opportunities.	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.	Disclose how the organisation identifies, assesses, and manages climate-related risks.	Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	a) Describe the organisation's processes for identifying and assessing climate-related risks.	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) Describe management's role in assessing and managing climate-related risks and opportunities.	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	b) Describe the organisation's processes for managing climate-related risks.	b) Disclose Scope 1, Scope 2, and if appropriate Scope 3 greenhouse gas (GHG) emissions, and the related risks.
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.

# NGFS climate scenario analysis

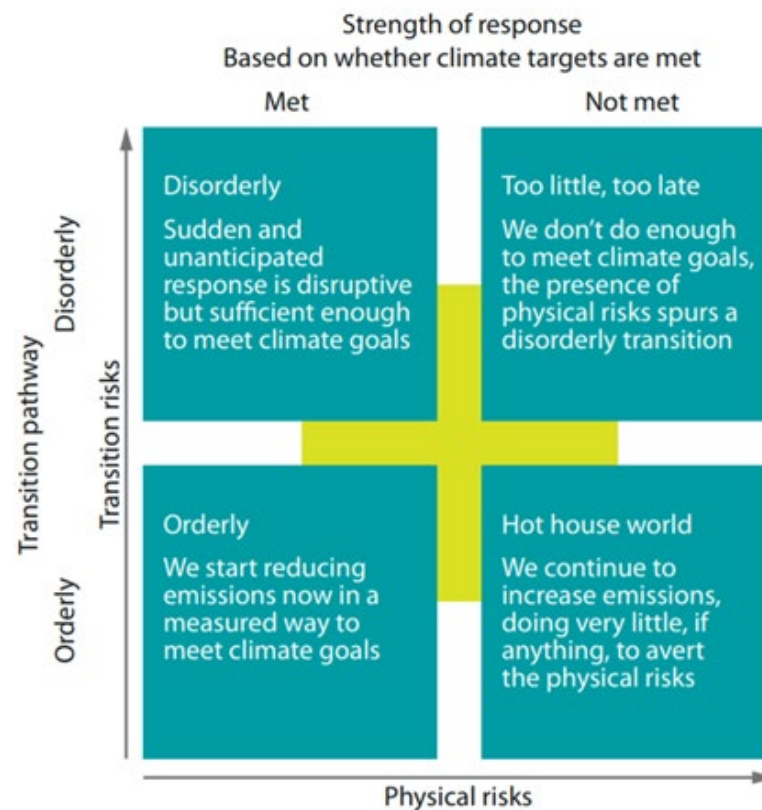
NGFS plans to release a series of reference scenarios and a handbook on climate scenario analysis in April 2020

## Initial requirements <sup>1</sup>

- **Scenarios** Include at least four scenarios
  - Each of the four scenarios will map onto one of the transition categories (see *RHS*)
  - At least one of the four scenarios will have a physical/transitional risk interaction
- **Inputs** Assumptions should be fully disclosed (e.g. baseline economic assumptions, policy drivers, etc.)
- **Outputs**
  - **Granularity** Will contain country-level geographic granularity and at the sectoral level, when possible
  - **Coherence** Multiple models should be combined in some coherent way, if relevant (e.g. physical & transitional models)
  - **Time horizon** Long-term, ideally as far as 2100, with annual increments
  - **Uncertainty disclosures** Should disclose range of outcomes and uncertainty
  - **Dissemination** Scenarios should be available to be downloaded in April 2020

## Scenarios <sup>1</sup>

Four major scenario categories are considered



The NGFS climate scenarios support research and analysis that will help central banks maintain the safety and soundness of their financial institutions <sup>1</sup>

## 5 | Global climate risk regulation trends

# Overview of the PRA stress test proposal (1/2)

The PRA proposal is the most ambitious stress testing plan developed to date and will likely serve as a model for other jurisdictions

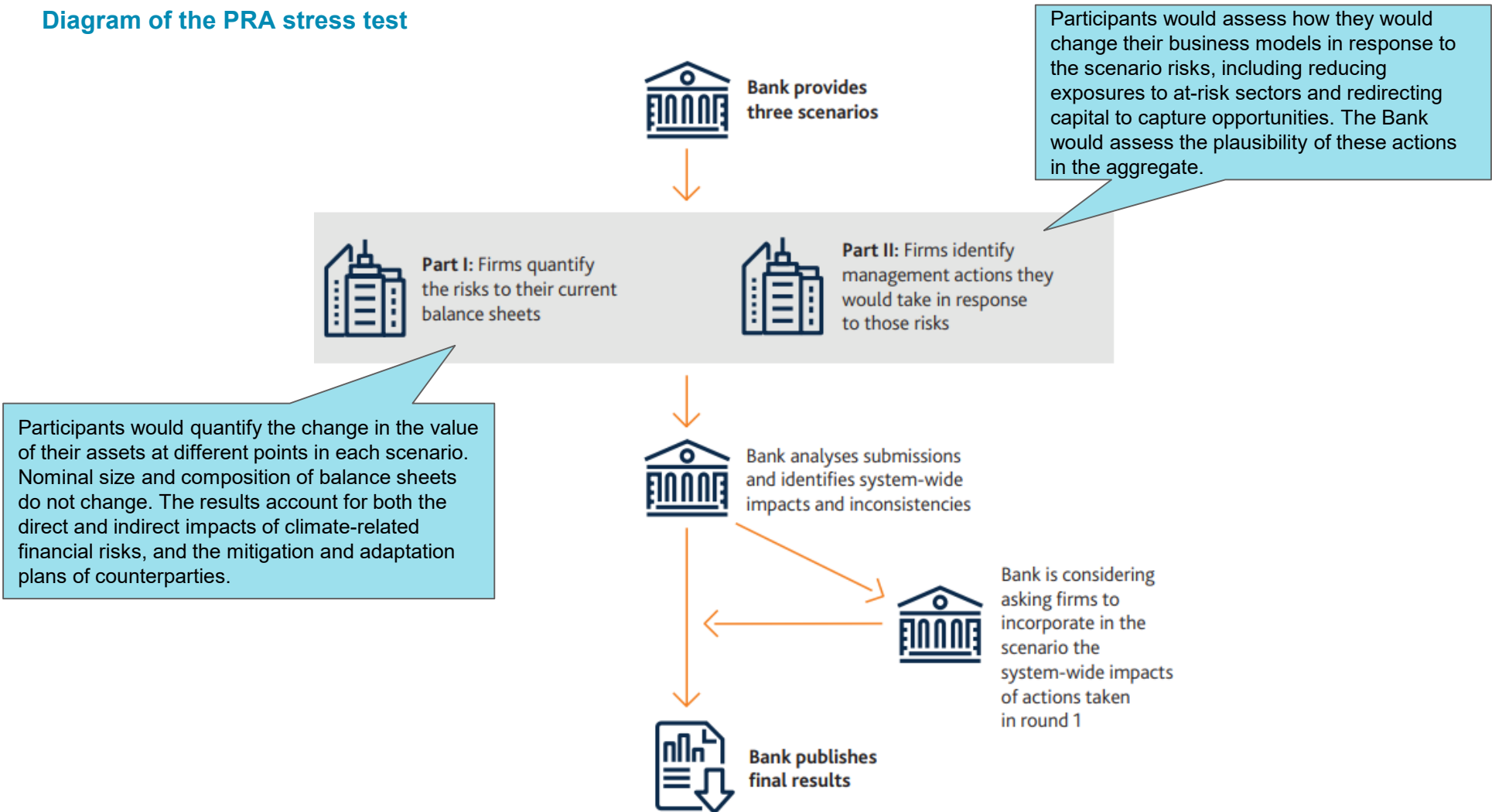
## Overview of the PRA's stress testing proposal

- U.K. bank participants in the 2021 annual cyclical scenario and selected large insurers in the PRA's 2021 Insurance Stress Test would be expected to participate
- Transition and physical risk would be tested together via three distinct scenarios:
  - Early policy action scenario
  - Late policy action scenario
  - No additional policy action scenario
- The stress test would have two stages
  - Part 1: Focusing on quantifying the change in value of assets at different points in the scenarios
  - Part 2: Assessing how participants would change their business models in response to risks
- A 30-year window would be used to reflect the fact that climate change risks are likely to crystallize over a much longer time horizon
- The focus would not be on testing firms' capital adequacy or setting capital requirements

# Overview of the PRA stress test proposal (2/2)

The PRA proposal is the most ambitious stress testing plan developed to date and will likely serve as a model for other jurisdictions

## Diagram of the PRA stress test



# Additional stress testing proposals

A number of jurisdictions have announced plans to create or explore climate stress tests

## Europe

- **France** Bank of France will define stress test parameters by end of March<sup>1</sup>
- **Netherlands** Launched & analyzed their stress tests in 2019<sup>2</sup>
- **Norway** Norway's central bank announced need to integrate climate into risk assessment<sup>3</sup>
- **Denmark** Develop & analyze stress tests in mid 2020<sup>2</sup>



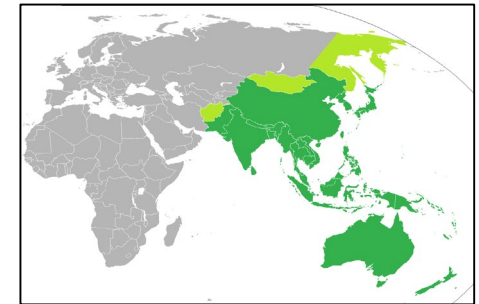
## Americas

- **United States** Mixed picture
  - Fed not currently planning to run climate stress tests<sup>4</sup>
  - US Senate purposed “Climate Change Financial Risk Act” to force mandatory climate-related disclosure<sup>3</sup>
  - Upcoming presidential election may alter future policy
- **Canada** Bank of Canada announced intent to develop climate stress tests<sup>5</sup>



## Asia & Oceania

- **Singapore** Monetary Authority of Singapore (MAS) will begin climate-related stress testing<sup>6</sup>
- **Australia** Australian Prudential Regulatory Authority (APRA) puts climate stress tests on list of priorities for 2020<sup>7</sup>



“The climate crisis demands that banks accurately estimate and mitigate risks to social and economic stability” – Elizabeth Warren, US Democratic Presidential Candidate<sup>8</sup>

1. Bloomberg, 2020

2. Danmarks Nationalbank: Analysis No. 26 (2019)

3. CFO, 2019

4. ABA, 2020

5. National Observer, 2019

6. CNA, 2019

7. Money management, 2020

8. Reuters, 2020

# EU taxonomy and benchmarking (1/4)

The EU taxonomy was agreed to by member states and will be given increasing prominence in 2020

## EU taxonomy overview



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What concerns and thoughts do you have about applying the EU taxonomy?

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## EU taxonomy and benchmarking (2/4)

“Green activities” must make a substantial contribution to a specific EU environmental objective without harming other environmental objectives

### EU environmental objectives



Climate change mitigation



Climate change adaptation



Sustainable use of water and protection of marine ecosystems



Transition to a circular economy



Controlling and preventing pollution



Supporting healthy ecosystems

### Steps to calculate taxonomy exposure<sup>1</sup>

1. Identify the activities conducted by the company, issuer or covered by the financial product (e.g. projects, use of proceeds) that could be eligible.
2. For each activity, assess whether the company or issuer meets the relevant criteria for a substantial contribution e.g. electricity generation
3. Verify that the DNSH<sub>2</sub> criteria are being met by the issuer. Investors using the Taxonomy would most likely use a due diligence like process for reviewing the performance of underlying investees.
4. Conduct due diligence to avoid any violation to the social minimum safeguards stipulated in the Taxonomy.
5. Calculate alignment of investments with the Taxonomy and prepare disclosures at the investment product level.

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What concerns and thoughts do you have about applying the EU taxonomy?

1. Source: EBA  
2. Doing no significant harm

# EU taxonomy and benchmarking (3/4)

## Complementing the taxonomy, the EU has launched two climate benchmarks

### EU climate benchmark summary

The EU proposed two benchmarks that certify whether a portfolio meets the Paris climate goals

- **Purpose** Measure whether portfolios meet Paris goals <sup>1</sup>
- **Key dates** Created 25 February 2019 and will apply to equity funds and corporate bonds from 30 April 2020 <sup>1</sup>
- **Benchmark types** <sup>2</sup>
  - **Paris-Aligned Benchmark (PAB)** requires 50% carbon reduction relative to the investment universe
  - **Climate Transition benchmark (CTB)** requires 30% carbon reduction relative to investment universe
- **Universal benchmark criteria** <sup>2</sup>
  - **Sector exposure** Portfolio must contain significant holdings in EU taxonomy's high impact sectors
  - **Scope 3 (indirect) emissions integration** Must be integrated within 4 years
  - **Self decarbonization requirement** 7% per annum
  - **Other** Must follow taxonomy's "do no significant harm"
- **Significance** <sup>1</sup>
  - First climate benchmark overseen by a regulator
  - Decarbonization will include absolute (vs. only relative) reductions

### Industry reactions to new benchmarks

- **First movers** Large index providers launched indices that adhere to these provisional benchmarks
  - S&P Dow Jones launched PAB climate change index on 29 January 2020 <sup>3</sup>
  - ISS ESG plan to launch indices <sup>1</sup>
  - MSCI launched two provisional climate indices that conform to CTB and PAB in Nov 2019 <sup>1</sup>
- **Competing benchmarks** Many providers are using EU benchmarks in conjunction with other benchmarks <sup>1</sup>
  - MSCI continues to offer legacy low-carbon index & global environment index
  - Euronext CDP Environment World (launched by CDP & Goldman Sachs) will only offer index based on its own climate change benchmarks
  - Other data providers are exploring creating their own benchmarks as well using ESG and climate data

1. IPE, 2020

2. Final Report on Climate Benchmarks and Benchmarks' ESG Disclosures (2019)

3. ETF Stream, 2020

# EU taxonomy and benchmarking (4/4)

## Comparison of the climate transition and Paris-aligned benchmarks

### EU climate benchmark criteria<sub>1</sub>

	EU Climate Transition Benchmark	EU Paris-Aligned Benchmark
<b>Risk-oriented minimum standards</b>		
Minimum scope 1+2(+3) carbon intensity reduction compared to investable universe	30%	50%
Scope 3 phase-in	Up to 4 years	Up to 4 years
Baseline exclusions	Yes	Yes
	Controversial weapons Societal norms violators	Controversial weapons Societal norms violators
Activity exclusions	No	Coal (1%+ revenues) Oil (10%+ revenues) Natural gas (50%+ revenues) Electricity producers with carbon intensity of lifecycle GHG emissions > 100gCO <sub>2</sub> e/kWh (50%+revenues)
<b>Opportunity-oriented minimum standards</b>		
Year-on-year self-decarbonisation of the benchmark	At least 7% on average per annum: in line with or beyond the decarbonisation trajectory from the IPCC's 1.5°C scenario (with no or limited overshoot)	
Minimum green/brown share ratio compared to investable universe (voluntary)	At least equivalent	Significantly larger (factor 4)
Exposure constraints	Minimum exposure to sectors highly exposed to climate change issues is at least equal to equity market benchmark value	
Corporate target-setting	Weight increase considered for companies which set evidence-based targets under strict conditions to avoid 'greenwashing'	
Disqualification from label if 2 consecutive years of misalignments with trajectory	Immediate	Immediate
<b>Relevance-oriented minimum standards</b>		
Review frequency:	Minimum requirements reviewed every three years to recognise market development as well as technological and methodological progress	

# The regulatory landscape continues to evolve and expand

## Climate-related legislation has been advancing across the world

### EU prepares additional mandatory climate reporting<sub>1</sub>

- EU is revising non-financial reporting rules to force firms to report on sustainability risks and opportunities
- Revisions are based on (1) EU Taxonomy and (2) better corporate disclosures
- EU is predicted to continue to use similar policy/legislation with the goal of becoming world's first climate-neutral continent by 2050

### EU “green list” could have major implications for international investments<sub>2</sub>

- From Dec 2021, EU member states must apply taxonomy to all public measures, standards, and labels of financial products
- Contains various investment incentives/disincentives
  - Incentives based on electrification, aviation biofuels, and hydrogen
  - Disincentives based on coal and natural gas
- Demands new buildings to be zero-carbon by 2030 & refurbishments be zero-carbon by 2050

### Climate risks push banks into a race with their regulators<sub>1</sub>

- NGFS began recommending non-binding climate disclosures in April 2019
- Local regulators may use NGFS disclosures guidance to create their own mandatory disclosures
- Banks will work more closely with climate scientists to assess/predict climate risks

### US financial sector may face abrupt climate risk disclosure requirements

- SEC privately debating about enforcing standardized climate-change disclosure<sub>3</sub>
- US senators wrote to BlackRock, JPMorgan chase, State Street, and other financial giants to enroll them in effort to combat oil lobby<sub>4</sub>
- The next US president can force abrupt, swift climate-related disclosures via the Dodd-Frank Act<sub>5</sub>

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The taxonomy is “a game-changer [...] investors and industry will for the first time have a definition of what is green. [...] [which] will enable billions in green investments to flow. ”

- Valdis Dombrovskis, EC executive VP<sub>2</sub>

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1. Bloomberg, 2020

2. The Fifth State, 2020

3. Mondaq, 2020

4. Responsible Investor, 2020

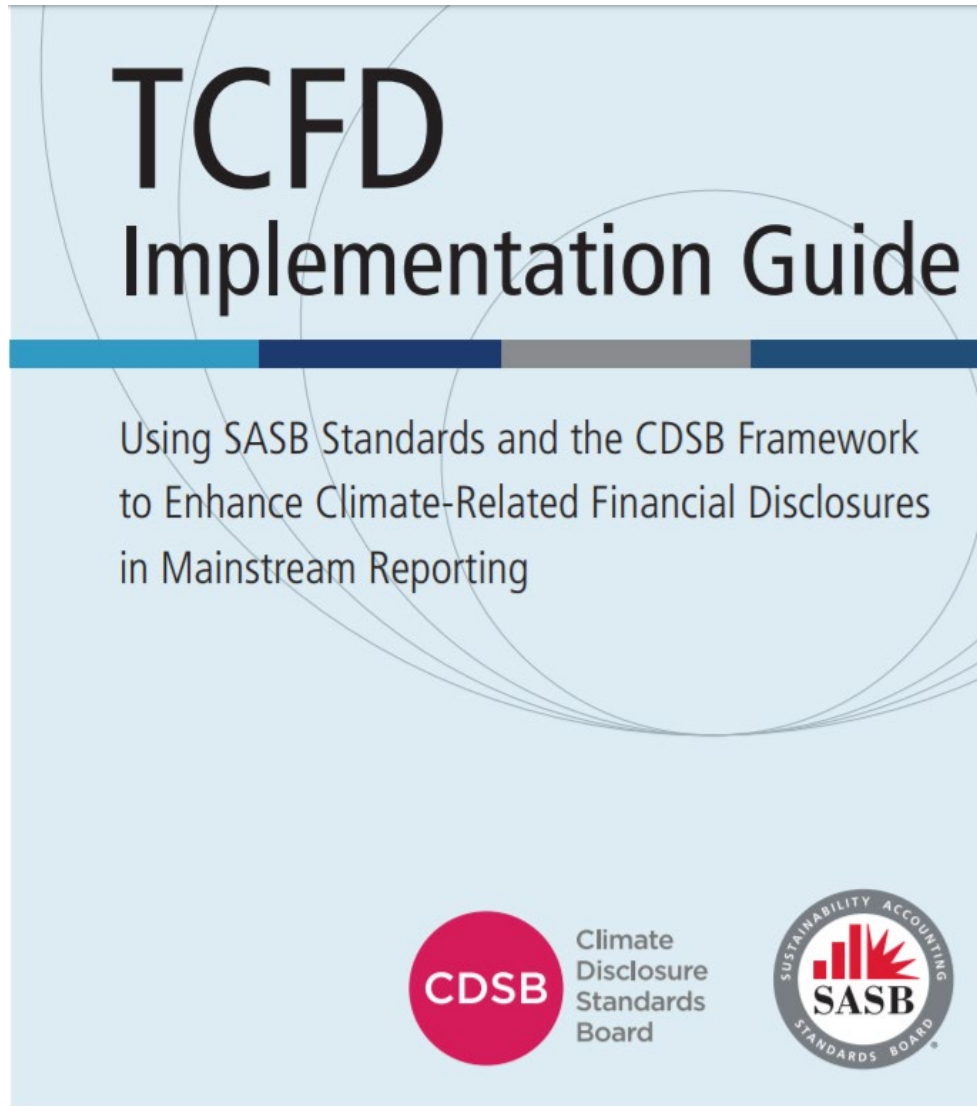
5. Vox, 2020

Appendix

Samples from TCFD Good Practice  
Handbook

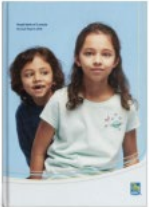
## TCFD good practices

The 2019 handbook provides specific examples of good practice and elaborates on the TCFD Implementation Guide



# Good practices: Governance

## Example from RBC annual report



### Royal Bank of Canada Annual Report 2018

Governance

This extract from the Royal Bank of Canada, a Canadian multinational banking and financial services company, shows that climate issues feature prominently at the top. Here, the Chair of the Board, in introducing the annual report, refers to climate change as the “most pressing issue of our age” and explains the Board’s oversight function in this respect.

The board believes strongly that achieving sustainable growth goes beyond generating profits, and that RBC has an important role to play as a corporate citizen that is fully involved in each of the communities where we do business. Specifically, we recognize that climate change is the most pressing issue of our age, and we oversee the bank’s enterprise-wide approach to accelerating clean economic growth and supporting the transition to a low-carbon economy.

This second extract from the Royal Bank of Canada explains which functions are involved in identifying, assessing, monitoring and reporting on climate-related issues, and ties this back to performance goals at a management level.

The Board and its Committees oversee senior management who is responsible for the execution of the management of E&S risks and opportunities. The Board provides oversight of our environmental strategy and our E&S risks, including our approach to managing these risks. GRM has a dedicated E&S risk team that develops approaches to identify, assess, monitor and report on climate-related risks, as appropriate. Performance goals on climate-related risks have been established at the management level.

# Good practices: Strategy

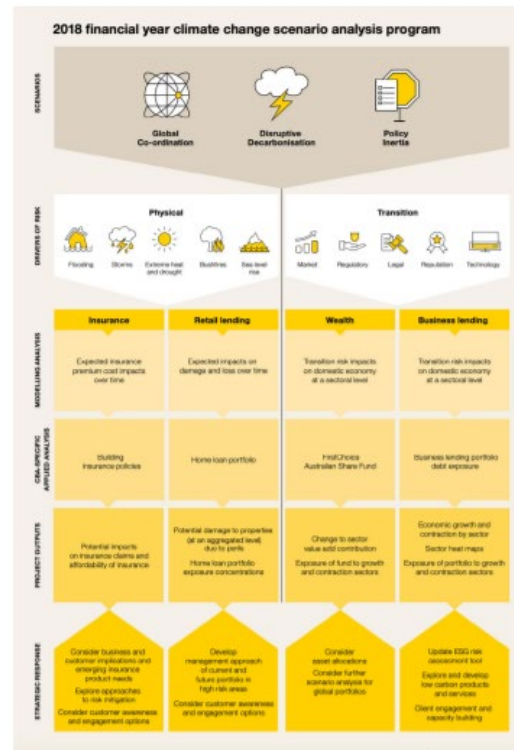
## Example from Commonwealth Bank annual report



**Commonwealth of Australia**  
 “Becoming a simpler, better bank”  
 Annual Report 2018

The following examples demonstrate different approaches for disclosing the resilience of the organisational strategy taking into account different climate scenarios.

Strategy: Scenario Analysis



The Commonwealth Bank of Australia demonstrates the findings of the scenario analysis it conducted as a diagram. The diagram shows the three scenarios it used, the related physical and transition risks, and the strategic response of the insurance, retail lending, wealth and business lending businesses. This diagram provides a useful overview of the elements which make up its scenario analysis programme and is supported by additional narrative with further details.

In the narrative which accompanies the diagram, the Commonwealth Bank of Australia describes the company-wide process it took to understand the potential impacts of climate-related risks and opportunities, noting that it prioritised the areas most material to its portfolios. It states that the scenarios are based on assumptions and should not be viewed as forecasts or predictions, offering descriptions of the underlying assumptions made for each of the three scenarios considered (i.e. 2°C with and without global coordination and a 3°C policy inertia scenario).

Retrieved from page 50-53:



# Good practices: Risk Management

## Example from HSBC annual report

TCFD Good Practice Handbook

GOOD PRACTICES IN TCFD RISK MANAGEMENT DISCLOSURES



### HSBC Holdings Plc Annual Report and Accounts 2018

British multinational banking and financial services institution HSBC shows how climate risks can be integrated into existing risk management processes over time. For example, it explains how the bank is working to embed transition risks into its day-to-day credit management. Moreover, the bank has identified six higher transition risk sectors based on their contribution to global carbon dioxide emissions and considers its exposure to these.

#### Risk Management

We are increasingly incorporating climate-related risk, both physical and transition, into how we manage and oversee risks internally and with our customers. Climate risk is now included as a theme in our 'Top and emerging risks report' to ensure that it receives monthly management oversight via the Risk Management Meeting of the Group Management Board ('RMM') (see page 30). In addition, our Board-approved risk appetite statement contains a qualitative statement on our approach to sustainability, which will be further expanded in 2019 to include climate risk explicitly.

We have a number of sustainability risk policies covering specific sectors. In 2018, we updated our energy policy to limit the financing of high-carbon-intensity energy projects, while still supporting energy customers on their transition to a low-carbon economy. From the release of the new energy policy in April 2018 until the end of 2018, HSBC financed no new coal-fired power plants.

Transition risk, in the context of climate change, is the possibility that a customer's ability to meet its financial obligations will deteriorate due to the global movement from a high-carbon to a low-carbon economy. HSBC is working to embed transition risk into its day-to-day credit risk management. The aim is that over time, each wholesale counterparty will receive a client transition risk rating based on their susceptibility to, and ability to manage transition risk.

Climate risk will also be explicitly included in the Board-approved risk management statement for 2019, showing the crucial linkages between board oversight of climate-related issues and risk management.

We have identified six higher transition risk sectors based on their contribution to global carbon dioxide emissions. These sectors are: oil and gas; building and construction; chemicals; automotive; power and utilities; and metals and mining. Over time we may identify additional sectors as having higher transition risk depending on a variety of factors, including country-level carbon dioxide reduction plans per the Paris Agreement.

The table below presents our exposure to the six higher transition risk sectors. These figures capture all lending activity, including environmentally responsible customers and sustainable financing. Further details on our approach to the quantification of exposures can be found in footnote 37 on page 67. This is expected to evolve over time as we develop new climate-related metrics.

The excerpt also shows how risk management disclosures and underlying approaches are likely to mature and evolve over time and will include development of related metrics.

Risk Management

Excerpted from page 10

# Good practices: Targets and Metrics

## Example from Prudential PLC annual report

