TCFD 101 Training

Participant Workbook

TCFD 101 Training

Introduction

This worksheet is designed for completion as part of the TCFD 101 training material. It includes areas to complete the key activities, space for personal reflection, and additional pages for general note taking.

Objectives

By the end of the workshop, participants should be able to:

1. Understand the potential impacts of climate change on businesses, and the importance of climate-related financial disclosure.

2. Explain why the TCFD was set up and who is expected to disclose against their recommendations.

3. Understand the key elements of climate-related financial disclosure and outline the characteristics of good practice.

4. Identify the initial steps organisations need to take to implement the recommendations of the TCFD.

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Climate risk and opportunities

Activity 1

Organise the risks and opportunities into the correct categories by adding the numbers into the correct boxes.

Transition risk	Physical risk	Opportunities

1) Introduction of a carbon price leads to increased operating costs.

2) Rising sea levels inundate operations located in coastal regions.

3) Introduction of government subsidies for companies that have “green” portfolios.

4) More frequent and severe storms damage facilities and infrastructure.

5) Considerations of climate change - related risks and opportunities throughout the organisation builds climate resilience.

6) Reputational damages due to stigmatisation of sector from negative stakeholder feedback.

7) New regulatory requirements addressing climate change increase compliance requirements.

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Introduction to the TCFD

Activity 2

Fill in the blanks below to complete the sentences.

Climate change is likely to have a significant and far-reaching impact on the _____ system. However, understanding and forecasting the timings and _____ of impacts of climate change on organisations and across the wider _____ is difficult and can be uncertain. Whilst there are many challenges and complexities associated with the transition to a _____ economy, it is becoming _____ important that climate-related information is reported.

financial	climate	increasingly	severity	low-carbon	standards
carbon	economy	decreasingly	less	sustainability	reporting

Financial markets are expected to appropriately _____ risk to ensure efficient capital-allocations. The recommendations of the TCFD were designed to help organisations provide disclosures on climate-related risks and _____ to support _____ by investors, lenders and insurers in allocating _____ and underwriting risk. Ultimately, better disclosure will lead to better decision-making which will enable more stable, _____ markets with less abrupt price_____, and facilitate a smoother transition to a low-carbon economy.

price	capital	adjustments	risk	resilient	timings
strategy	structure	decision-making	plan	opportunities	climate

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Scenario analysis

Activity 3

Using the assumption in the table, consider the future risks that might impact your organisation. Complete the table below.

Scenario assumptions

	Transition risks	Physical risks
1.5°C scenario	• More international and national climate policies to limit emissions, including carbon pricing mechanisms. • Significant changes in the energy mix and infrastructure. • New green technologies.	• Some physical risks, with a small increase in frequency and severity. • Increased temperature and changes in wind patterns leading to increased wildfire. • Changes to weather patterns leading to more frequent drought and floods.
4°C scenario	• Some international and national climate policies now, but likely to lead to “disorderly” and rapid introduction of policies in the future. • Slower changes to the energy mix and infrastructure. • Price of raw materials increases.	• Significant physical risks, with increased frequency and severity. • Reduction in crop yields from extreme temperatures. • Sea level rise of above 0.50m leading to more significant flooding and storm surges in coastal areas.

Potential risks the to the company

Note: Think about your organisation, the business lines, products and services, and locations of operations.

	Transition risks	Physical risks
1.5°C scenario		
4°C scenario		

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Examples of good practice

Activity 4

Analyse the examples of disclosure on the following pages, and identify three strengths and three areas that could be improved. Complete the table.

The TCFD recommendations

Governance

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

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.

Risk Management

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

Metrics and Targets

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

	Strengths	Areas to improve
Extract 1: Allianz, Sustainability Report 2020		
Extract 2: Eni, Integrated Annual Report 2020		
Extract 3: Unilever, Annual Report & Accounts 2020		

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Extract 1: Allianz, Sustainability Report 2020

Climate change considerations are an integral part of our insurance and investment strategy. We use regular stress-tests and additional climate-related scenario analyses to inform our strategic decisions as well as individual transactions.

We perform sensitivity and scenario analyses with time horizons up to 2050 and including scenarios ranging from 1.5°C to 4°C of average warming by the end of the century. We make use of internal models as well as external tools. While material time horizons naturally differ depending on the lines of business under consideration, the range of scenarios we apply allows us to better assess the variety of risks and opportunities associated with climate change.

Typical time horizons

Short-term	Medium-term	Long-term
up to three years	three – ten years	ten+ years
As defined, for instance, in our standard Top Risk Assessment process.	Needed for establishing solvency considerations and capital adequacy.	As, for instance, required for strategic decisions and transactions with investment horizons of several decades like real estate and infrastructure.

We rely on our own and third-party scenarios provided by renown institutions and initiatives such as the IPCC[2]. NGFS[3]. IPR[4]. the institutions

We have called on the International Energy Agency already twice to develop and make available a full scenario aligned with 1.5°C and net-zero emissions by 2050. While the IEA's most recent World Energy Outlook included a partial 1.5°C scenario, it stopped short of providing an outlook beyond 2030 and all underlying data tables as for the other scenarios.

We aim to use a number of different scenario providers and scenarios for our analyses to reflect the range of potential future developments and reduce the sensitivity to individual scenario narratives and assumptions. To this end, it has proved useful to have access to an increasing number of scenarios in general and especially those aligned with 1.5°C pathways.

When we conduct analyses which assess scenario alignment, we adjust our scenario selection using guidance developed by the AOA which is focused on 1.5°C scenarios with no or low emission overshoot. When conducting outside-in impact scenario analysis, we use a broader range of scenarios in terms of temperature outcomes. For physical risks we are applying RCP 4.5 and 8.5 for our analyses and aim to incorporate RCP 6.0 in the future as well. For transition risks we are using, amongst others, IPCC's SR15 and AR5 scenarios, IEA's SDS, NZE2050, 2DS and B2DS scenarios, and the NGFS scenarios released in 2020.

We apply scenarios, for instance, in analyzing decarbonization challenges and pathways of sectors and assets, potential stranded assets and technology developments across different sectors. On physical risks, we seek to identify potential impacts on physical assets we insure, own, or operate, as well as impacts on client or investee level and associated portfolios. This type of analysis is being used for both sides of the balance sheet as well as our operations including procurement. We also use scenario data and analysis to develop forward-looking criteria for our investment decisions with regard to carbon-intensive business models and low-carbon opportunities.

Carbon Stress Test

This year, we publish for the first time results of an approach to modelling carbon risks for our listed equity portfolio with a bottom-up approach. It shall complement top-down approaches such as those put forward by financial markets regulators. We see merit in a model which gives us full transparency on methods and parameters, is easy to implement and gives a first understanding of evolution of potential climate impact on portfolio. It further gives possibility to cross-check external methodologies and provides a basis for potential development of more elaborate models going forward.

Methods, assumptions and parameters

The approach uses effective carbon prices as a proxy for policy intensity, e.g. actual carbon pricing, energy-related subsidies and incentives, standards for energy efficiency and emissions.

The fundamental idea is that an increase in emissions price entails a decrease in earnings at the level of individual investee companies. The decrease in earnings can be translated into a stock market value loss based on price-to-earnings multiples. The model requires assumptions on e.g. cost pass-through, price elasticities, or regulatory easing (either explicitly or implicitly via effective carbon prices) which are kept simple for this first version and need to be refined further.

The starting point is the carbon footprint of the listed equity portfolio, as disclosed in section 05.6, using scope 1 and 2 emission figures. On this we apply carbon price shocks derived from the climate scenarios developed in the Network for Greening the Financial System.

Read more on the Network for Greening the Financial System here.

In the scenarios, these prices materialize over the coming ten years and are depending significantly on intensity of policy action and underlying scenario assumptions. Carbon prices projected for 2030 range from € 45 to 115 per tonne CO_2e in 2°C-aligned scenarios, and increase to € 95 to 374 per tonne CO_2e in 1.5°C-aligned scenarios. The model assumes instantaneous changes of effective carbon prices applied to the portfolio, with no mitigation actions.

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Extract 2: Eni, Integrated Annual Report 2020

Main climate change indicators

		2020	2019	2020-2019	
Direct greenhouse gas emissions - Scope 1 [1]	(million/t_{eq})	45.26	69.98	(24.72)	-35.3%
Indirect greenhouse gas emissions - Scope 2 - Purchase of electricity from the grid (location based)	(million/t_{eq})	1.43	1.55	(0.12)	-7.7%
Indirect greenhouse gas emissions - Scope 2 - Purchase of electricity from the grid (market based)	(million/t_{eq})	2.28	2.30	(0.02)	-0.9%
Indirect greenhouse gas emissions - Scope 2 - Distribution grid losses (location based)	(million/t_{eq})	3.56	3.82	(0.26)	-6.8%
Indirect greenhouse gas emissions - Scope 2 - Distribution grid losses (market based)	(million/t_{eq})	5.57	6.00	(0.43)	-7.2%
Indirect greenhouse gas emissions - Scope 3	(million/t_{eq})	47.70	56.92	(9.22)	-16.2%
- of which emissions connected with gas sales	(million/t_{eq})	*21.48*	*23.92*	*(2.44)*	*-10.2%*
Specific direct greenhouse gas emissions - Scope 1	(gCO_{2eq}/kWh)	214	298	(84)	-28.2%
Specific emissions of SO_2	(g/kWh)	0.10	0.59	(0.49)	-83.1%
Specific emissions of NO_x	(g/kWh)	0.36	0.60	(0.24)	-40.0%
Specific emissions of particulates	(g/kWh)	0.01	0.12	(0.11)	-91.7%
Zero-emission generation	(% of total)	63.4	54.9	8.5	15.5%
Total direct fuel consumption	(Mtoe)	23.9	30.1	(6.2)	-20.6%
Average efficiency of thermal plants [2]	(%)	44.2	42.0	2.2	5.2%
Water withdrawals in water-stressed areas [3]	(%)	22.9	25.4	(2.5)	-9.8%
Specific water withdrawals for total generation [4]	(l/kWh)	0.20	0.33	(0.13)	-39.4%
Reference price of CO_2	(€)	24.72	24.8	(0.1)	-0.3%
Ordinary EBITDA for low-carbon products, services and technologies [5]	(millions of €)	15,616	16,241	(625.0)	-3.8%
Capex for low-carbon products, services and technologies	(millions of €)	9,575	9,131	444.0	4.9%
Ratio of capex for low-carbon products, services and technologies to total	(%)	94.0	92.0	2.0	2.2%

Extract 3: Unilever, Annual Report & Accounts 2020

Governance

The Board take overall accountability for the management of all risks and opportunities, including climate change (see page 44). Our CEO and Executive Board member, Alan Jope, is ultimately responsible for oversight of our climate change agenda. The Corporate Responsibility Committee and Audit Committee review our climate reporting and receive presentations from sustainability experts, including the Sustainability Advisory Council. The Board is supported by the ULE. The ULE meet monthly to discuss key strategic matters and during 2020, several agenda items related to climate change were discussed, including progress against our USLP climate goals and our new Compass climate goals.

Additional specialist governance groups are in place to support our climate agenda and ULE decision making, including:

- Carbon Neutral Board: Drives delivery of our carbon ambition at corporate and country level and leads strategic partnerships and policy on renewables. Chaired by our Chief Supply Chain Officer, Marc Engel.
- Sustainable Sourcing Steering Group: Supports our strategy focusing on long-term, sustainable access to our key crops. Chaired by our Chief Procurement Officer, David Ingram.

Remuneration linked to achievement of sustainability and climate change targets is a key part of our reward framework. For management employees – up to and including the ULE – reward packages include fixed pay, a bonus as a percentage of fixed pay and eligibility to participate in a long-term management co-investment plan (MCIP) linked to financial and sustainability performance. The Sustainability Progress Index accounts for 25% of the total MCIP award. It includes amongst others consideration of progress against our manufacturing Scope 1 and 2 greenhouse gas target and a deforestation goal covering palm oil. Subject to shareholder approval at the 2021 AGM the MCIP will be replaced by a Performance Share Plan (PSP) and the performance measures for the PSP will continue to include the Sustainability Progress Index. See pages 92 to 93 for more on MCIP including the role of the Board's Compensation Committee and Corporate Responsibility Committee in determining the Sustainability Progress Index outcome each year and changes related to the PSP.

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TCFD Implementation Roadmap

Activity 5

Planning an implementation roadmap is a good way to start on your TCFD journey. The table below sets out 4 stages of implementation. Complete the table to set out your TCFD implementation roadmap, including the key activities, what actions need to be taken and the required resources to complete the stage.

Stage 1		
Key activity	Actions and timelines	Resources required
Stage 2		
Key activity	Actions and timelines	Resources required
Stage 3		
Key activity	Actions and timelines	Resources required
Stage 4		
Key activity	Actions and timelines	Resources required

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Reflection and next steps

Activity 6

What are the next steps that you plan to take to start/enhance your organisations TCFD implementations?

Have we reached the objectives?

Participants should now be able to:

- ❑ Understand the potential impacts of climate change on businesses, and the importance of climate-related financial disclosure.
- ❑ Explain why the TCFD was set up and who is expected to disclose against their recommendations.
- ❑ Understand the key elements of climate-related financial disclosure and outline the characteristics of good practice.
- ❑ Identify the initial steps organisations need to take to implement the recommendations of the TCFD.

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Notes

Use this page to add any additional notes.

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