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TCFD session- New reporting era

CDP Turkey 2018 Training & Workshop

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Content

Tackling climate change
A corporate challenge

From energy constraint to climate constraint

In a quickly evolving context, many opportunities are to be seized

- **From energy constraint to climatic constraint**
  - Until recently, the main constraint was energy (fear of peak oil)
  - The challenge now is to limit our consumption of fossil resources to respect climatic constraint (two degrees)
- **Climate change risks increasing but still poorly understood**
- **Business impacts are already very significant**
  - Bankruptcies in the coal industry in the United States (Peabody)
  - Impairment of assets and spin off by European electricians
  - Climate change as an opportunity for Tesla
- **Unclear political and regulatory context**
  - Lack of political leadership in Europe
  - Changing Position of the United States
  - China as the future world climate leader?

Carbon neutrality, a key challenge to address

Carbon neutrality in the 2nd half of the century, a horizon set by the Paris Agreement

- The "two-degree" target put forward by the Paris Agreement (COP21) is relatively abstract
- The Paris agreement states that this corresponds to achieving **carbon neutrality before the end of the century**
- This target shapes the energy / climate context in different ways:
  - In the short to medium term, companies have to maintain or increase their efforts to reduce emissions;
  - In the the long term, companies have to analyze their decisions to check that they are compatible with carbon neutrality.
- Some governments, companies and local authorities are beginning to commit to carbon neutrality: France, Danone, Copenhagen...

A growing pressure to assess and disclose climate-related risks

Growing global awareness and pressure to fight climate change

- Paris agreement (2° taget and zero net carbon before the end of the century)
- National and local commitments (e.g. French position on carbon neutrality by 2050)
- Growing pressure from **stakeholders**, including customers and investors
- More actions from **competitors**

Analysis and disclosure of climate-related risks becoming a part of the business level-playing field

- Given the importance of climate-related risks, assessing them is necessary **to increase the resilience of the business model** and strategy
- **Investors** need to be confident that companies integrate climate-related risks in their strategy, governance and risk management processes (TCFD)

Development of guidance and best practices

- Assessment of current best practices
- Adaptation of these practices to each company's needs and current practices

Progressive integration of climate-related risks in companies' strategy, governance and processes

Business models are more and more impacted by climate and environment policies

And these impacts sometimes arrive quicker and are stronger than expected

5 years ago, who had forecast all these major changes?

Heavy divestment from the coal industry

- Less than 10 years ago, Peabody, the US coal company, was considered as a major success (among top companies according to *Forbes* in 2008)
- Major investors decided to divest from coal in the aftermath of the COP21
- Coal plants and coal mines' values dropped significantly
- Peabody went bankrupt
- In the US, 30 billion $ of decreasing value and 31 000 lost jobs in the coal sector since 2009-2010
- Engie had to close its Hazlewood (Australia) coal plant, 1 542 MW, bought in 2010-2012

What next?

Several major world investors, even if their revenues came from oil and gas, decided to divest from oil & gas (Norwegian Fund, Rockefeller foundation)…

European power producers completely reshaping their business plan

- A few years ago, the business was rather stable for the European power industry (EDF, Engie, Areva, RWE, E.ON, etc.)
- The Fukushima disaster (2011) and the strong increase in power production from renewable sources created a very difficult context for nuclear and fossil fuel power plants
- It led to significant asset impairments and heavy losses
- Several companies decided to split new businesses (renewables) from old ones: RWE, E.ON
- Engie, relying heavily on nuclear and gas a few years ago, now develops renewables, energy efficiency and digital services

What next?

The power industry gets more decentralised, more digital and more renewable in the coming years

Diesel cars soon to disappear in Europe and elsewhere)?

- Germany was very proud of its big cars (VW)
- The "Dieselgate" created suspicion regarding diesel motors
- European countries contemplate the increase of taxes on diesel, or even the end of diesel and gasoline cars

What next?

Several countries plan banning diesel and gasoline cars before 2050 (France, UK, India, China…)

It is getting cheaper to produce power from renewable than from nuclear plants

- The cost of solar photovoltaic technologies have decreased by more than 80% since 2009, and it should further decrease by 59% by 2025
- Security constraints have increased the cost of new nuclear plants

What next?

What is the remaining technological potential to decrease production and storage costs?

The future is really uncertain, in particular the one of climate and energy policies

Several very different scenarios exist;
Some may be more likely than others,
but discarding those that we do not like is dangerous

Traditional wisdom: the EIA scenarios

The International Energy Agency (IEA) drafts prospective scenarios on energy that are well documented.

Based on current technologies, **IEA's scenarios tend to underestimate significantly technological evolutions** (such as the decrease in photovoltaic costs) **and the development of renewables**.

In IEA's view, oil demand is still increasing for a few years; then (fossil) gas is taking over as the world main energy source, for several decades.

It corresponds more or less to the future that oil & gas companies expect: no major change, but a continuous evolution with fossil fuels retaining their leadership.

It is not necessarily unlikely, but the fact that it is wished does not make it more likely…

More disruptive scenarios are possible

Many more disruptive scenarios exist.

- 100% renewable energy in power production + a major share of electric vehicles by 2050 do not seem completely out of reach.
- Quick and significant decrease in oil demand.
- End of fossil transportation fuels (except aviation) between 2040 and 2050.
- Gas can still be used as a transition fuel but the share of bio-based gas may get significant.

Weak signals and major breakthroughs

A few major breakthroughs, even if they appear as reasonably unlikely as of now, are not impossible at all and could impact significantly the oil & gas industry:

- Technological breakthrough in power storage battery;
- End of diesel and gasoline for road transport before 2050;
- Political limits on oil & gas exploitation to remain within the carbon constraint.

In such an uncertain and quickly evolving context, scenario analysis is the best way to capture the future business-shaping trends and to emerge as the world sustainable leader among major energy companies

As shown before, climate policies led to major and unexpected changes in the energy business

More changes are probably to come, but which ones?

Many uncertainties and potential tipping points lie ahead of us, e.g.:

- Are we serious with the 2° target?
  - To what extent will governments and companies implement concrete policies in line with the Paris agreement?
  - Basic calculations show that complying the 2° target requires to keep underground around ¾ of unexploited fossil resources => which alternative resources will be used?
- Will China decide to be carbon neutral in the near future?
  - China seems to be willing to take the climate leadership, thrown away by the US and not really taken over by the EU…
  - China has already announced that it contemplates banning diesel and gasoline cars. How far will they go in this direction?

The future is not certain… but it is not necessarily what you wish it to be…

In such an uncertain context, it seems very important to analyse different scenarios, to make sure the company can adapt to different situations (in order to avoid the Kodak/Nokia/Peabody/Areva situation…)

- Listening to weak signals
- Adapting lobbying messages to develop competitive advantages

Update on TCFD

Introduction
The Task force on Climate-related Financial Disclosures (TCFD)

What is the TCFD?

The TCFD is a private sector-led, policy-neutral task force that seeks to develop recommendations for voluntary climate-related financial disclosures that are **consistent, comparable, reliable, clear, and efficient, and provide decision-useful information to lenders, insurers, and investors.**

Who make up the TCFD?

The TCFD was established by the Financial Stability Board (FSB) of the G20 countries. The FSB is chaired by Mark Carney. The TCFD was founded and chaired by Michael Bloomberg. The task force has 32 representatives, including C-Suite representatives from major corporates and financial sector actors, including both users and preparers of disclosures from across the G20’s constituency covering a broad range of economic sectors and financial markets.

What is its mission?

The FSB Task Force on Climate-related Financial Disclosures (TCFD) developed voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders. Its report was published on 30 June, 2017.

Task Force Members

Chair and Vice-Chairs

Michael Bloomberg
Chairman
Founder and President
Bloomberg L.P.

Yeo Lian Sim
Vice-Chair
Special Adviser
Singapore Exchange

Graeme Pitkethly
Vice-Chair
Chief Financial Officer
Unilever

Denise Pavarina
Vice-Chair
Managing Officer
Banco Bradesco

Christian Thimann
Vice-Chair
Group Head of Strategy, Sustainability and Public Affairs
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Members

Jane Ambachtsheer
Partner, Chair – Responsible Investment
Mercer

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Managing Director and Global Head of Sustainable Finance
JPMorgan Chase & Co.

Wim Bartels
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KPMG

Bruno Bertocci
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Neil Hawkins
Corporate Vice President and Chief Sustainability Officer
The Dow Chemical Company

Thomas Kusterer
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Eloy Lindeijer
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Giuseppe Ricci
Chief Refining & Marketing Officer
ENI

Martin Skancke
Chair, Risk Committee
Storebrand

Andreas Spiegel
Head Group Sustainability Risk
Swiss Re

Steve Waygood
Chief Responsible Investment Officer
Aviva Investors

Fiona Wild
Vice President, Sustainability and Climate Change
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Michael Wilkins
Managing Director, Environment & Climate Risk Research
S&P Global Ratings

Jon Williams
Partner, Sustainability and Climate Change
PwC

Deborah Winshel
Managing Director, Global Head of Impact Investing
BlackRock

Special Adviser

Russell Picot
Chair, Audit and Risk Committee, LifeSight
Board Chair, HSBC Bank (UK) Pension Scheme Trustee
Former Group Chief Accounting Officer
HSBC

Source: Task Force on Climate-related Financial Disclosures

Where it all started

Breaking the "tragedy of the horizon", global leaders call for action

"**The challenges currently posed by climate change pale in significance compared with what might come.** (…) The far-sighted amongst you are anticipating broader global impacts on property, migration and political stability, as well as food and water security. **So why isn't more being done to address it?"**

Mark Carney, governor of the Bank of England, 29th September 2015, Speech given at Lloyd's of London

"Over the long-term, environmental, social and governance (ESG) issues – ranging from climate change to diversity to board effectiveness – **have real and quantifiable financial impacts**."

Larry Fink, CEO BlackRock, 2nd February 2016, letter to chief executives at S&P 500 companies and large European corporations

"We ask the **Financial Stability Board** to convene public and private sector participants to review how the financial sector can take account of climate related issues."

Communiqué of the G20 Finance Ministers and Central Bank Governors Meeting, April 2015

Background

The Task Force's report and supporting materials were published in June 2017.

The report provides context, background, and the general framework for climate-related financial disclosures—it is intended for broad audiences.

The annex provides the next level of detail to help companies implement the recommendations.

The technical supplement is a further level of detail that can be helpful for companies in considering scenario analysis.

Disclosure Recommendations

The four recommendations are supported by **specific disclosures** organizations should include in financial filings or other reports to provide decision-useful information to investors and others.

Governance	Strategy	Risk Management	Metrics and Targets
Disclose the organization's governance around climate-related risks and opportunities.	Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	Disclose how the organization 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.
Recommended Disclosures	**Recommended Disclosures**	**Recommended Disclosures**	**Recommended Disclosures**
a) Describe the board's oversight of climate-related risks and opportunities.	a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	a) Describe the organization's processes for identifying and assessing climate-related risks.	a) Disclose the metrics used by the organization 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 organization's businesses, strategy, and financial planning.	b) Describe the organization'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 organization'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 organization's overall risk management.	c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.

Supplemental Guidance

In addition to guidance for all sectors, the Task Force developed **supplemental guidance** for the financial sector and non-financial groups to assist those organizations in implementing the recommended disclosures.

Financial Sector Industries

- Banks
- Insurance Companies
- Asset Managers
- Asset Owners

The financial sector was organized into four major industries largely based on activities performed. The activities are lending (banks), underwriting (insurance companies), asset management (asset managers), and investing (asset owners).

Non-Financial Groups

- Energy
- Transportation
- Materials and Buildings
- Agriculture, Food, and Forest Products

The non-financial groups identified by the Task account for the largest proportion of GHG emissions, energy usage, and water usage.

Key innovations as the TCFD sees them

The Task Force's recommendations and guidance:

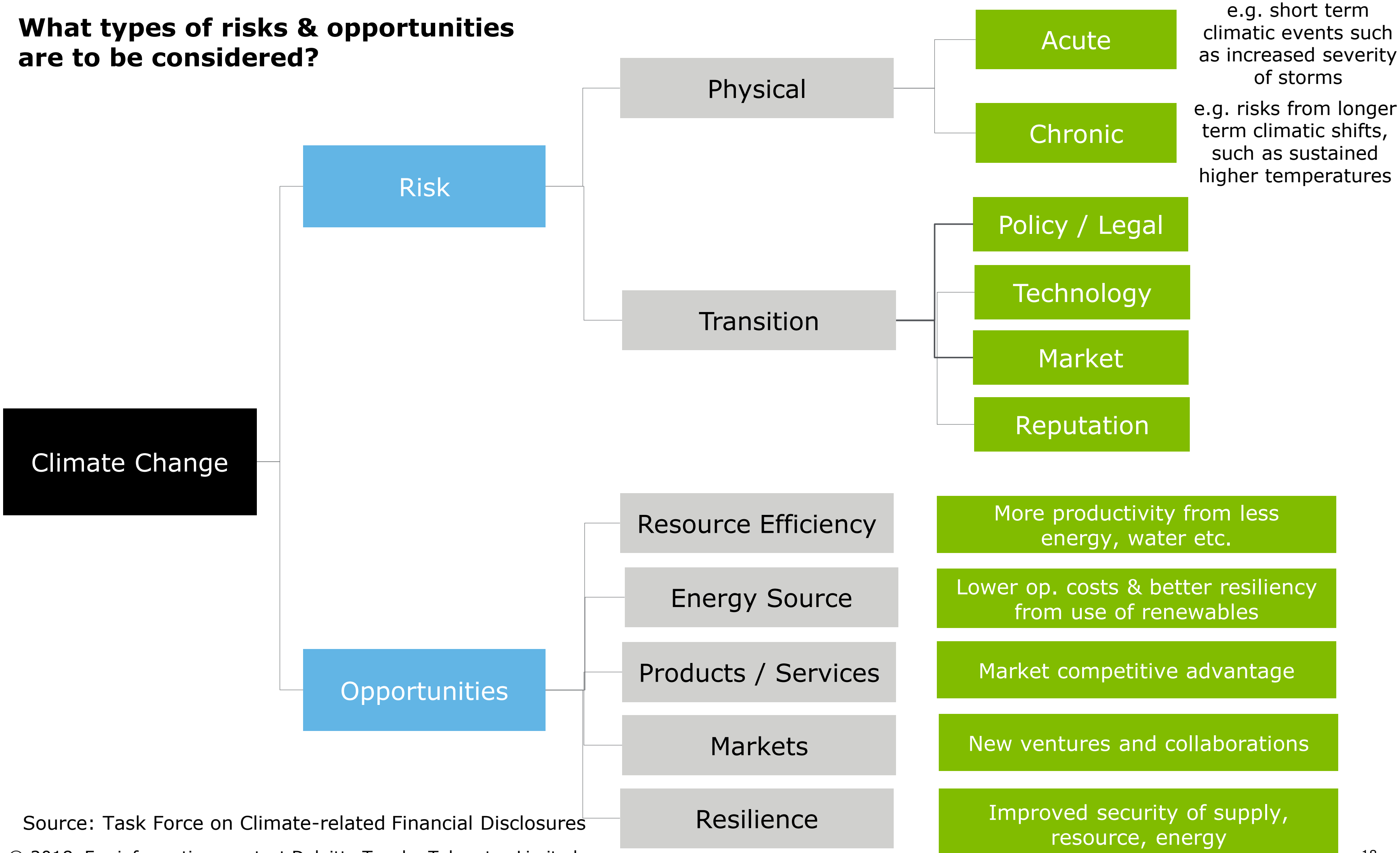
- Can apply to **any company in the world,** and can be scaled with any level of sophistication
- Should be addressed in **financial filings**
- Are designed to solicit **decision-useful information** for investors and others
- Encourage forward-looking information through **scenario analysis**
- Provide **additional guidance** to sectors and industries most impacted by climate change
- Apply to organizations across the financial sector to address the full **investment chain**
- Place greater emphasis on risks and opportunities related to the **transition** to a lower-carbon economy
- Represent Task Force, industry, and financial sector **consensus**

Source: Task Force on Climate-related Financial Disclosures

The TCFD risk model

Climate related risks & opportunities

What types of risks & opportunities are to be considered?



Source: Task Force on Climate-related Financial Disclosures

Focus on Financial Impact

RISKS

Transition

Policy and Legal
- Carbon pricing and reporting obligations
- Mandates on and regulation of existing products and services
- Exposure to litigation

Technology
- Substitution of existing products and services with lower emissions options
- Unsuccessful investment in new technologies

Market
- Changing customer behavior
- Uncertainty in market signals
- Increased cost of raw materials

Reputation
- Shift in consumer preferences
- Increased stakeholder concern/negative feedback
- Stigmatization of sector

Physical

- Acute: Extreme weather events
- Chronic: Changing weather patterns and rising mean temperature and sea levels

OPPORTUNITIES

Resource Efficiency
- Use of more efficient modes of transport and production and distribution processes
- Use of recycling
- Move to more efficient buildings
- Reduced water usage and consumption

Energy Source
- Use of lower-emission sources of energy
- Use of supportive policy incentives
- Use of new technologies
- Participation in carbon market

Products & Services
- Development and/or expansion of low emission goods and services
- Development of climate adaptation and insurance risk solutions
- Development of new products or services through R&D and innovation

Markets
- Access to new markets
- Use of public-sector incentives
- Access to new assets and locations needing insurance coverage

Resilience
- Participation in renewable energy programs and adoption of energy-efficiency measures
- Resource substitutes/diversification

Strategic Planning
Risk Management

Financial Impact

Revenues
Expenditures

Income Statement ↔ Cash Flow Statement ↔ Balance Sheet

Assets & Liabilities
Capital & Financing

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Key Elements of Disclosure Recommendations

Location of Disclosure

- The Task Force recommends that organizations provide climate-related financial disclosures in their mainstream (i.e., public) **annual financial filings**.

- The recommendations were developed to apply broadly across sectors and jurisdictions and do not supersede national disclosure requirements for financial filings.

- If certain elements are incompatible with national disclosure requirements, the Task Force encourages organizations to disclose those elements in **other official company reports**.

- Organizations in the four non-financial groups that have more than one billion U.S. dollar equivalent (USDE) in annual revenue **should consider disclosing** strategy and metrics and targets information in other reports when the information is not deemed material and not included in financial filings.

Financial Filings

Required annual reporting packages in which organizations deliver their audited financial results under the laws of the jurisdictions in which they operate.

Other Official Company Reports

Should be issued at least annually, widely distributed and available to investors and others, and subject to internal governance processes that are the same or substantially similar to those used for financial reporting.

Key Elements of Disclosure Recommendations (continued)

Principle of Materiality

- The disclosures related to the **Strategy and Metrics and Targets recommendations** are subject to an assessment of materiality.
- The disclosures related to the **Governance and Risk Management recommendations** are not subject to an assessment of materiality and should be provided because many investors want insight into the governance and risk management context in which organizations' financial and operating results are achieved.

Scenario Analysis

- The Task Force encourages forward-looking information through scenario analysis—a useful tool for considering and enhancing resiliency and flexibility of strategic plans.
- Many investors want to understand how **resilient organizations' strategies are to climate-related risks**.
- Recommended disclosure (c) under Strategy and the related guidance asks organizations to describe the resilience of their strategies, taking into consideration different climate-related scenarios, including **a 2°C or lower scenario**.

> ***2°C Scenario***
>
> *Provides a common reference point that is generally aligned with the objectives of the Paris Agreement.*
>
> ***Scenario Analysis Threshold***
>
> *The Task Force established a threshold for organizations that should consider conducting more robust scenario analysis to assess the resilience of their strategies (those in the four non-financial groups with more than 1B USDE in annual revenue).*

Disclosure on specific climate-related scenario analysis
Likely the biggest challenge for companies' implementation

Those companies with the greatest identified climate risks should disclose key parameters and assumptions underpinning their scenario analysis, which could include any/all of:

1. **Climate scenarios** – including a diversity of potential outcomes, $2^{o}C$ and others, linked to major disruptions / changes
2. **Any model adjustments** made to the reference $2^{o}C$ scenario
3. **Key input parameters**
4. **Internal carbon pricing applied**
5. **Assumptions about policy impact timings**
6. **Assumptions on technology responses**
7. **Potential variability of inputs depending on location**
8. **Sensitivities to key assumptions**
9. **Timeframes**
10. **Conclusions drawn on business impact of each scenario**

Sector and industry-specific risk analysis already exists, such as:
- SASB's technical bulletin on climate risk (2016)
- Moody's investor service – environmental risks heat map
- Mercer – investing in a time of climate change
- WRI and UNEP FI Framework on Carbon Asset Risk
- S&P Global Ratings – how environmental and climate risks factor into corporate rankings

Climate-related financial risk models

These can be produced either in-house or via a third party, and should :
- Be transparent around parameters
- Be comparable
- Use a consistent, and documented methodology
- Fall under clear governance
- Be linked to financial performance

Disclosure of scenario impacts is to be used to inform dialogue with stakeholders – and can be either at an enterprise-wide or regional/market level

N.B. Analyses can be qualitative or quantitative (it is expected companies move from the former to the latter depending on maturity).

Specific modelling guidance exists in the TCFD's Annex document *The Role of Scenario Analysis in Supporting Disclosure of Climate-related Risks & Opportunities (2017).*

Sectors on which the TCFD focused its attention
Which sectors are likely to be most affected?

Guidance is produced for the financial sector, then four groups of non-financial sectors (Energy, Materials & Buildings, Transportation & Agriculture).

Sectors and key industries for making disclosures	
Financial	Banks
	Insurance Companies
	Asset Owners
	Asset Managers
Non-Financial	Energy
	Transportation
	Material & Buildings
	Agriculture, Food, and Forest Products

The financial and non-financial industries highlighted are those seen as most constrained by reliance on three key factors:

- Greenhouse gases
- Energy
- Water

Sector and industry-specific guidance is provided in the TCFD's Annex document *Implementing the TCFD's Recommendations (2016).*

Timeline for the Task Force's Work

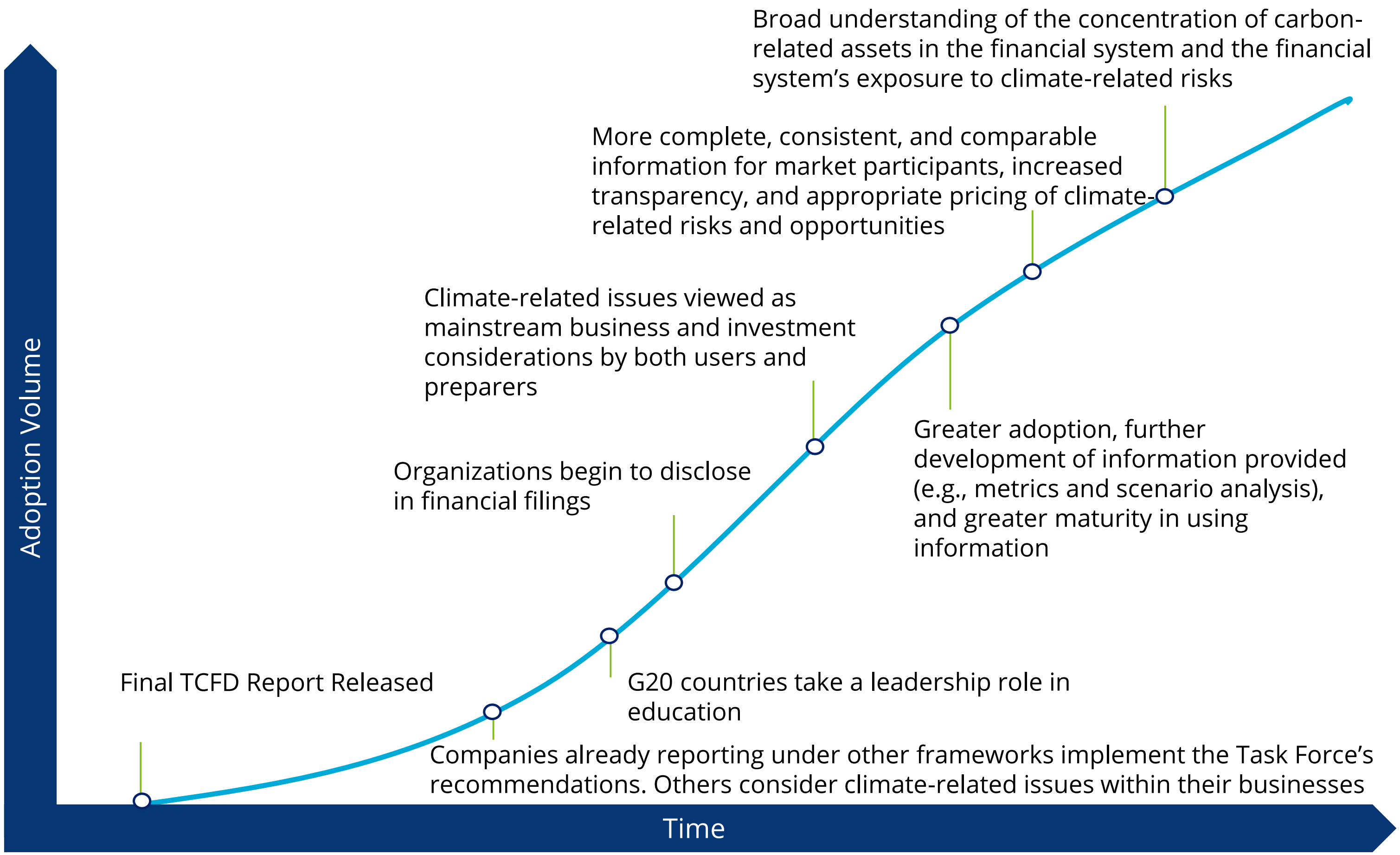
The Task Force will work with organizations and other partners to support and monitor adoption and submit a report on implementation of the recommendations to the FSB in September 2018.

Timeline

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

Implementation horizon

The Task Force expects that **reporting of climate-related risks and opportunities will evolve** over time as organizations, investors, and others contribute to the quality and consistency of the information disclosed.



Source: Task Force on Climate-related Financial Disclosures

My takeaways

My takeaways (1/2)

Who knows about TCFD?

- There is a very broad awareness of the TCFD among not only the green ghetto but the corporate world at large. In that respect, the TCFD has fully achieved its objective of reaching out to the corporate world and created a dramatic change in the mindset of corporate leaders.
- This has probably been made possible by the visibility of Michael Bloomberg, in particular in its declarations as an answer to Donald Trump's stance on the matter. The momentum is not necessarily lower than it would have been if the US elections had generated a different outcome.
- The adoption of the TCFD recommendations is likely to be far greater in the most developed countries than in other G20 countries such as Russia, Saudi Arabia or Indonesia.

Are companies disclosing along the TCFD guidelines?

- The buy-in by companies in FY17 is unsurprisingly low.
- The question is whether companies are seriously getting prepared for specific disclosures in FY18.
- The assessment of the buy-in by companies of the TCFD disclosures will be difficult to segregate from adoption of other environmental disclosures or even ESG disclosures.

Which sectors will need our help?

- The sectors that incur the most difficult challenge for adoption of the TCFD recommendations are likely to be the Asset Owners and Asset Managers.
- On the other hand, Insurance companies are likely to disclose their exposure as they have started to do.
- The four non-financial sectors identified by TCFD will likely be the ones generating the best practices, in particular the Energy - oil and gas (sub)sector.

What about the challenge of scenario analysis?

- Scenario analysis so far, based on a limited sample of 40 reports reviewed by TCFD, is limited to 20% of issuers.
- One of the difficulties faced by organizations willing to develop and potentially disclose the results of their scenario analysis is likely to be in the choice of the time horizon which is far beyond the usual time horizon in the radar of CFOs.

My takeaways (2/2)

Who within organizations will be tasked with the TCFD disclosures?

- Sustainability leaders seem to embrace the subject much more than the CFOs, which is indeed not what the intent of the TCFD was.

In which report will the disclosures be proposed by issuers?

- The opening of the TCFD latest report in June 2017 to disclose climate-related information outside of the financial report is likely to be widely adopted by companies who will continue reporting such information in their sustainability report.
- The question is whether they will evolve in the coming years and move such information to the financial report.
- Even in the future, the TCFD disclosures will likely be disseminated among various reports for any given company, e.g its annual report and its sustainability report.
- Only a few companies are going to produce a TCFD specific report. Indeed, it was not the intent of the TCFD to create such standalone reports. But there has been a misunderstanding at a stage, in particular in view of the fact that Bloomberg themselves issued such a stand-alone report.

How will TCFD interact with other reporting frameworks?

- The consolidation of reporting frameworks is in many people’s minds. The TCFD could play an important role in that process. But the scope of the TCFD is very narrow, only one environmental dimension in the ESG broad spectrum. So, the TCFD cannot be the host of a consolidated merging between SASB, GRI and IIRC to mention only the most important ones.
- But there is a likelihood that the reporting overhang will be aggravated by yet one more mapping of the sustainability report to the 11 TCFD disclosures, as is the case already with GRI, UNGC, etc.

Will TCFD disclosures remain voluntary?

- There will likely be regulations coming up in a handful of G20 countries but we do not see them materialize yet.
- France remains the only country with such a regulation (which was implemented before the TCFD report).