Scenarios for Financial Disclosure

Jae Edmonds Joint Global Change Research Institute

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BACKGROUND

G20 Finance Ministers and Central Bank Governors asked the Financial Stability Board (FSB) to review how the financial sector can take account of climate-related issues.

The FSB established the Task Force on Climate-related Financial Disclosures (TCFD) to develop recommendations for more effective climate-related disclosures that:

- could "promote more informed investment, credit, and insurance underwriting decisions" and,
- in turn, "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."

Industry Led and Geographically Diverse Task Force

The Task Force's 32 international members, led by Michael Bloomberg, include providers of capital, insurers, large non-financial companies, accounting and consulting firms, and credit rating agencies.





CURRENT CLIMATE-RELATED DISCLOSURE CHALLENGES

Currently, challenges with respect to climate-related disclosure are faced by:

- Issuers who generally have an obligation under existing law to disclose material information, but lack a coherent framework to do so for climate-related information,
- Investors, lenders, and insurers who need decision-useful, climate-related information to make informed capital allocation and financial decisions, and
- Regulators who need to understand risks that may be building in the financial system

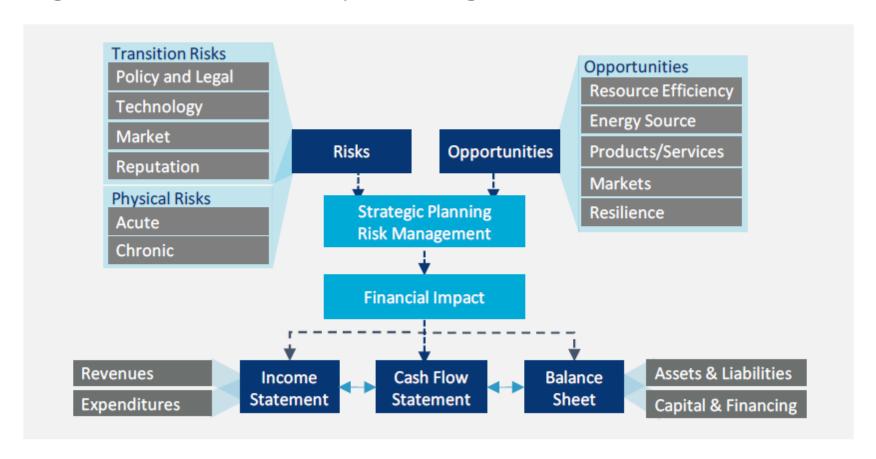
The Task Force aims to provide the solution:

a voluntary, consistent disclosure framework that improves the ease of both producing and using climate-related financial disclosures



FOCUS ON FINANCIAL IMPACT

The Task Force focused on financial impact of climate-related risks and opportunities on an organization, rather than the impact of an organization on the environment.



Key Elements of Disclosure Recommendations

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



Key Elements of Disclosure Recommendations: Scenarios

- 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 risk.
- Recommended disclosure 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 lower scenario.

2°C Scenario

Provides a common reference point that is generally aligned with the objectives of the Paris Agreement.

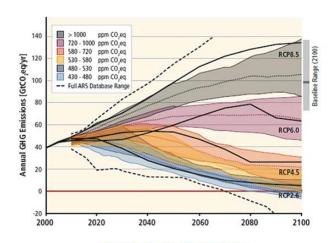
Scenario Analysis Threshold

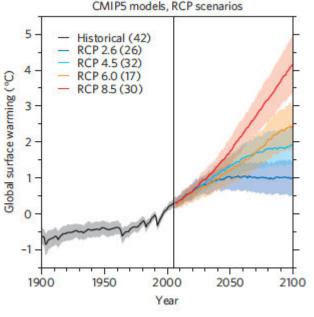
The Task Force established a threshold for organizations that should consider conducting more robust scenario analysis to assess the resilience of their strategies (those in the four non-financial groups with more than 1B USDE in annual revenue).

Desirable Scenario Properties

In designing a 2°C scenario, organizations may wish to consider publicly available scenarios that are

- used, referenced, and issued by an independent body;
- 2) wherever possible, supported by publicly available data sets;
- 3) updated on a regular basis; and
- 4) linked to functional tools (e.g., visualizers, calculators, and mapping tools) that can be applied by organizations.





Overview of Publicly-Available Climate-Related Scenarios

Publicly-Available Scenarios

Transition

3.6°C
IEA New Policies Scenarios

<mark>2°C</mark> 450 Scena

IEA 2DS/450 Scenarios, DDPP, IRENA, Greenpeace

1.5°C Forthcoming IEA 1.5DS scenario

Physical

6°C IPCC RCP 8.5

4°C IPCC RCP 6.0

2.6°C IPCC RCP 4.5

2°C IPCC RCP 2.6

Source: TCFD Recommendations, June 2017

Integrated Assessment Models provide consistent, reproducable scenarios

INPUTS

Socioeconomic drivers

Technology

Policy

- Energy System
- Land System



- Economic System
- Climate System

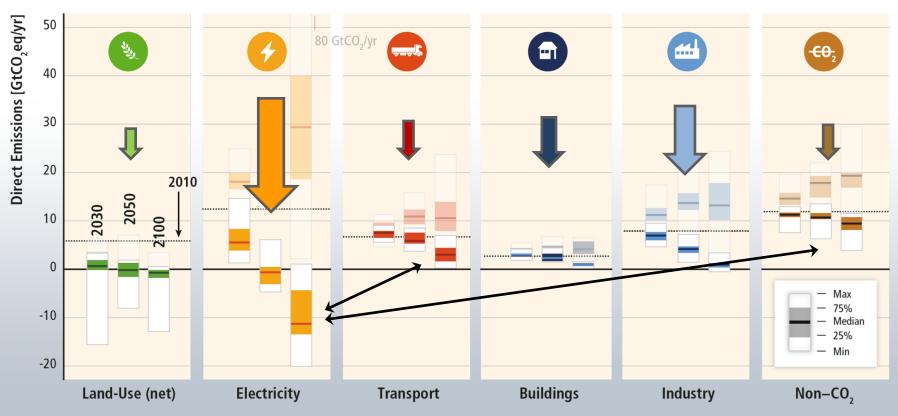
OUTPUTS

- Energy use
- Land use
- Emissions
- Investments
- Tech Deployment
- Prices
- Macro-economic impacts
- Sustainable Development



Mitigation requires changes throughout the economy. Efforts in one sector interact with mitigation efforts in others.

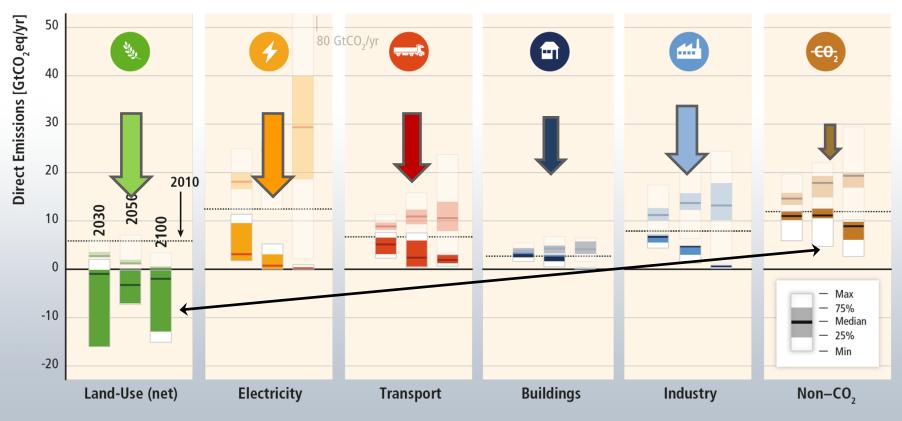
2°scenario with CCS





Mitigation requires changes throughout the economy. Efforts in one sector interact with mitigation efforts in others.

2°scenario without CCS





TCFD and BoE Conference on Climate Scenarios, Financial Risk and Strategic Planning (31 Oct - 1 Nov, 2017)

Objective: Bring together the world's leading scenario producers

→ IAMC, IEA

Together with private sector participants

- → Oil, Gas (Shell, Statoil, Enel)
- → Utilities (EDF, NRG)
- → Materials, Chemicals (BHP Billiton, BASF)
- → Automotive (BMW, Rolls Royce, Maersk)
- → Finance (Banks, Institutional investors)
- → Consultancies (2DII, Mercer, Deloitte, BNEL, ...)

Triggering future collaboration and ultimately, more rigorous scenario analysis



Conference conclusions on next steps

- Make scenario analysis more widely used for strategic decision making
- Create opportunities for further exchange between scenario providers and users
- Develop methods that investors can use connecting scenarios to the assets in their portfolios
- Make existing scenario data more readily available still, for instance through online visualization tools and data portals (and more accessible e.g. via tutorials)



Source: https://www.ustda.gov/

 Establish a process to agree on 'anchor scenarios (publicly accessible, highly transparent and well documented). Firms could use anchor scenarios as reference point to explain how their own scenarios differ from them. It would improve comparability of disclosures while at the same time allowing firms to flexibly develop and use their own scenarios. CICERO is in the business of providing financial risk management advisory services



Scientists demystify climate scenarios for investors

What is needed?

• What data? e.g. energy mix, new capacity additions, investments, carbon prices, land use

What granularity? temporal, sectoral, technology,

spatial

 What is needed to contextualize scenarios? Scenario meta-information

What complexity and transparency?
 Standards, Selection, Documentation

 What process? Institutions, Interfaces, Interactions



Source: https://www.occ.treas.gov/

DISCUSSION