Using scenarios in corporate disclosure of physical climate risk

The Task Force on Climate-Related Financial Disclosures (TCFD) and the Bank of England (BoE) held a conference: ‘Climate Scenarios, Financial Risk and Strategic Planning’, in London on October 31st and November 1st 2017. Acclimatise experts attended and have prepared this briefing note to advise those involved in preparing responses to the TCFD’s recommendations. The event explored how scenarios can assist companies to understand and evaluate climate change risks and opportunities. Insights on the importance of scenarios, key attributes, and principles for their use were discussed and are summarised in this briefing note. Conference presenters focussed on transition risk, leaving key issues concerning the use of scenarios in physical risk assessment unexplored. This was an omission on the part of the organisers, but perhaps understandable given the added complexity of assessing the risks of a changing climate. In this note we provide an insight into the role of scenarios in physical risk assessment as an introduction to a topic deserving its own conference.

Importance of scenarios

Corporates and financial institutions are beginning to respond to the TCFD recommendations, assessing both risks and opportunities, in preparation for reporting and disclosure.

“Scenario analysis is a critical forward-looking tool to address challenges and acquire key information”, Mary Shapiro, Special Advisor to the Chair, TCFD & Former Chair, US Securities and Exchange Commission.

The TCFD recommendations strongly advocate for the development and use of scenarios when analysing climate risk. To that effect, a Technical Supplement has been developed alongside their recommendations, titled ‘The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities’. As noted by Andrew Blau, Director of Deloitte Advisory Strategic Risk, “scenarios are powerful tools that allow for the exploration of different plausible futures in the face of uncertainty”. The uncertainty around both the impacts of a changing climate, and the policy and regulatory responses, present significant new challenges when compared with other environmental problems facing society – a point highlighted by Lord Nicholas Stern, chair of the Grantham Research Institute on Climate Change and the Environment at the London School of Economics. The scale of the effects stemming from physical impacts of climate change and from policies formulated to promote a lower carbon economy is enormous. How the world will respond to these new drivers of change is still uncertain. Traditional models and forecasting tools fall short when it comes to dealing with complex problems with such considerable unknowns.

Scenarios can help corporates and financial institutions broaden the horizons in their planning processes whilst increasing their flexibility and adaptability. Andrew Blau also considered how the development of scenarios can challenge users to develop ‘outside-in’ thinking, embrace diverse perspectives, and take the long view. The reward for these efforts is the ability to examine how a company’s strategies may perform, offering an improved view of changing risks and opportunities going forward. Scenarios can play a significant role in helping corporates ’ develop their own view of the world, but it is important to understand what they can and cannot offer within the context of disclosure and as a strategic business-planning tool.
Exploratory narratives, not descriptive predictions

A vital point highlighted by many presenters during the course of the conference was that scenarios are hypotheses, not predictions of what the future may look like. They provide a narrative, either qualitative or quantitative, which ‘describes a path of development leading to a particular outcome’ (TCFD Recommendations Technical Supplement). “[Scenarios] should be thought of as a means for discourse on important variables such as policy and technology possibilities in the future”, noted Dr Elmar Krieger of the Potsdam Institute for Climate Impact Research (PIK).

Which scenarios to use?

At the conference, companies such as Shell and BHP Billiton showcased how they have developed and deployed a variety of scenarios to help think through various energy transitions. Shell discussed how they make use of different types of scenarios: from published ‘context exploring’ scenarios used to consider external issues that may affect their business, to ‘decision-centered’ scenarios, which are part of their internal decision-making processes. It was also noted that scenarios can either be borrowed from other organisations or developed internally.

Scenarios are not forecasts; they are explorations of possible futures, and multiple scenarios can be created to revise alternative views. Presenters referred to the importance of exploring several scenarios to gain different insights and noted that there are thought to be over 100 transition pathway scenarios.

A general set of principles for the use and development of scenarios emerged from the conference, which could help guide organisations through scenario selection.

Principles to bear in mind around the use of scenarios

The development of scenarios will require board level leadership and a continuing resource/time commitment by companies. Scenario development is iterative, and scenarios will need regular resets to ensure they reflect the present-day jump-off point. On day two of the conference, held under Chatham House rules, presenters identified a number of key principles for companies to bear in mind when developing and using scenarios, including:

• Use multiple sources for data and narratives, and search out insights from new sources.
• Ask: what do I have to believe for this scenario to be plausible?
• Be sceptical of scenarios that look like the past.
• Use the most up to date data and reference sources.
• Ensure your scenarios reflect the variety in spatial, political, social, regulatory and environmental factors within the countries and sub-national areas in which you operate.

TCFD recommendations

The TCFD was established by the Financial Stability Board in response to a request by the G20 Finance Ministers and Central Bank Governors who recognised the potential implications of climate change for the global financial system. The TCFD recommends corporates and financial institutions assess both risks and opportunities, in preparation for reporting and disclosure. Disclosure is recommended in four areas: governance, strategy, risk management, and metrics and targets. The TCFD recommendations, which were issued in June 2017, have helped bring climate risk to the corporate reporting agenda, and many corporates and financial institutions are now taking action to include climate risks and opportunities in the annual financial reporting.

Physical risks are not yet being given due prominence compared to transition risks

The conference was notable for its focus on transition to low-carbon energy pathways, and the use of scenarios to help companies assess their transition risks. There was, however, very limited discussion of physical climate risks and the use of physical risk scenarios to explore implications for the performance of corporates and financial institutions.

Acclimatise sees a few key reasons for this. It is notable that there is more guidance in the TCFD recommendations on transition risks, and verifiable and auditable metrics for transition risks are already available and easier to evaluate within the context of business models in all sectors. It is also easier to adjust transition risk scenario outputs to fit into existing business and financial risk appraisal systems. Finally, there are many published comprehensive transition risk scenarios from multiple sources, e.g. International Energy Agency (IEA), Deep Decarbonization Pathways Project (DDPP).

Scenarios exploring the impacts of a changing climate (physical risk) for corporates and financial institutions are less well developed. We have a robust and authoritative science evidence base produced by the Intergovernmental Panel on Climate Change (IPCC) setting out possible changes in our climate. There are also several excellent sector impact models together with integrated assessment models (IAMs), which use climate model outputs to explore risks at the sectoral, system and spatial levels over time. These models, however, do not cover all sectors and geographies in a comprehensive, consistent way,
and there are knowledge gaps. For instance, while the ‘transportation’ and ‘materials and buildings’ industrial sectors are highlighted for disclosure by TCFD, there is a lack of comprehensive assessments of physical risks facing these sectors. Further, physical risks to specific investments in these sectors will be determined by the location, design, condition, and operation of physical assets.

The development of metrics which enable adaptation and resilience to be evaluated over time and across sectors is an emerging area of knowledge, and best-practice has not yet been established. These issues create challenges for corporates and financial institutions in using the available information to populate their own business scenarios, or to use scenarios produced by third parties, as envisaged by the TCFD. Progress on the development and application of physical risk scenarios falls short of what is required, as demonstrated by the lack of presentations and discussion on physical risk at the conference.

Developing physical risk scenarios is complex due to the inherent challenges in trying to understand and evaluate the physical risks and opportunities generated by a changing climate. Impacts from physical risks may also only become apparent over longer time frames, sometimes spanning periods that go beyond the current strategic thinking of corporates and financial institutions. Yet, understanding and addressing the materiality of physical risks, and identifying opportunities will be a vital piece of determining the overall success and long-term sustainability of these organisations, and will be a crucial step for building the resilience of corporate portfolios, as noted by Dr Fiona Wild, Vice-President Sustainability and Climate Change, BHP Billiton.

**Acclimatise – experts in physical risk for responding to TCFD recommendations**

Acclimatise has worked on physical climate risk and adaptation with corporates and financial institutions for over a decade, helping them identify and respond to physical risks and to take advantage of emerging opportunities generated by a changing climate. We have witnessed the corporate, societal and environmental benefits stemming from the promotion of resilience-building strategies.

At present, we are supporting a Working Group of 16 international banks through a pilot project organised by the United Nations Environment Finance Initiative (UNEP-FI) to meet the TCFD recommendations and develop a harmonised process for the banking sector. We are helping the Working Group develop scenarios and analytical approaches to better understand physical risks and their impact on assets and investment portfolios. We believe the ability of firms to embrace risks and opportunities, and factor them into strategic planning will improve their performance, and create a more resilient banking sector, able to meet the evolving needs of customers as they respond to a changing climate.

Acclimatise is also working for the European Bank of Reconstruction and Development (EBRD) and the Global Centre of Excellence on Climate Adaptation (GCECA) to develop risk, opportunity and strategic metrics for the financial services sector to assist in TCFD disclosures. A major conference will be held on 31 May 2018 to present the results of this work.

While many tools, data sets, studies, and reports exist to analyse physical risks for fixed assets, aggregating these across a portfolio, sector, or country requires a fresh approach. With our guidance, corporates and financial institutions can begin to embark on their TCFD journey.

**Further information:**

- Documents from the TCFD, including the recommendations, technical supplement, and annex on implementation can be located here: [www.fsb-tcfd.org/publications](http://www.fsb-tcfd.org/publications)
- United Nations Environment Finance Initiative: [www.unepfi.org](http://www.unepfi.org)
- Global Centre of Excellence on Climate Adaptation: [www.gceca.org](http://www.gceca.org)

To discuss how your organisation can meet TCFD requirements, and assess and disclose physical climate risks and opportunities, please contact Laura Canevari: L.Canevari@acclimatise.uk.com