Financial Regulators Awaken: Prepare to Disclose Climate Risk

How risk management and analytics can support the Financial Stability Board's recommendations

June 2017

Empower Results®

Climate Risk Disclosure is on the Way

Many businesses and governments have been reporting on environmental and climate data for over 15 years now, but the way they do is set to change. Following the UN's Paris Agreement to address climate risk by cutting greenhouse gas emissions, financial regulators are increasingly concerned about the systemic risks that climate change poses to the financial system. After the 2008 financial crisis, regulators do not want any disorderly transitions in the market due to a misallocation of capital.

We have already seen regulators from the US to France[1] and Australia[2] begin to ask businesses and investors to report on climate risks in their financial reports. In February 2017 asset manager State Street, with $2.47 trillion under management, is pressing companies to disclose their climate risk[3]. This has now become a reality that will be a game-changer for corporate financial reporting.

The taskforce takes action

During the Paris Conference of 2015, the G20's Financial Stability Board created a Taskforce of Climate-related Financial Disclosures (TCFD). Headed by founder of Bloomberg LP, Michael Bloomberg, the TCDF was tasked with drawing upon the multitudes of **best practice for disclosing climate risk and framing these risks—through accepted accounting standards—to make the risks and opportunities more transparent to investors**.

Drawing over 30 experts from eight industries, including four insurers, four banks, and two pension funds, the TCFD released its recommendations for disclosure in December 2016. This paper focuses on how organisations can embrace the risk management issues raised by the recommendations.

Empowering corporate strategy

The recommendations offer a new lens for investors and organisations to approach climate risk disclosure. Materiality and cash flow are the key items that differentiate the TCFD recommendations from many existing standards. **Risk management, including insurance and risk analytics, is given a key role in helping businesses understand and quantify climate risks.** While currently voluntary, businesses would be wise to pre-empt future regulations, potential legal questions on materiality, and changing attitudes of investors.

Above all, however, **the recommendations provide a framework that can enhance risk management, empower corporate strategy, and improve resilience in a fast changing world.**

It's All about Cash Flow

Unlike Corporate Citizenship reports, which have often reported carbon emissions and other environmental impacts, the TCFD is suggesting the risks be put into financial terms.

1 *In the US the SEC issued guidance on climate change disclosures, though increasingly the momentum is with the states. In France, the French Energy Transition Law came into force in 2016.*
2 *https://www.theguardian.com/science/2017/feb/17/apra-says-companies-must-factor-climate-risks-into-business-outlook*
3 *https://www.bloomberg.com/news/articles/2017-01-26/state-street-asks-boards-to-disclose-more-on-climate-preparation*

The impact of climate risk in assets, liabilities, and above all, cash flows, is what makes the report unique. Assessing physical disaster risk on cash flow is challenging without understanding the contingent capital held by organisations. To this effect, the TCFD refers to international accounting standards and their approaches to **disclosing contingent liabilities and contingent assets**[4]. This suggests risk transfer capital could satisfy disclosure standards around climate risk.

More importantly, organisations should consider previous cash flow impacts from meteorological events and the associated mitigation from risk transfer capital if they disclose. Research from Standard and Poors indicates that natural catastrophes lead to a one-notch downgrade 40% of time for firms[5]. Taking on a **total cost of risk (TCOR) approach** can help businesses disclose the relevant information to investors. The Aon Risk Maturity Index considers TCOR a key metric for businesses to assess, with associated benefits in share price[6]. As such, risk managers will be key stakeholders along with sustainability and finance teams in clarifying and delivering disclosures.

Risk Management at the Heart of Disclosure

The report asks all businesses to describe how they identify and assess climate risk so risk management forms one of the 'core elements' of the TCFD's recommendations on disclosure.

Risk requires a hazard, be that human caused or natural disaster, disruptive technology, regulation, or litigation. The hazard alone does not lead to risk. An organisation must be exposed to that hazard and have an associated vulnerability. A building in Greenland does not face extreme heat risk just as there is no risk of a crop freeze in the Amazon. The TCFD frames risk into two unique categories.

4 *IASB, International Accounting Standard 37 "Provisions, Contingent Liabilities and Contingent Assets" and Account Standards Codification 450 "Contigencies"*

5 *S&P Ratings Direct, "Climate Change Will Likely Test The Resilience Of Corporates' Creditworthiness To Natural Catastrophes", 20 April 2015.*

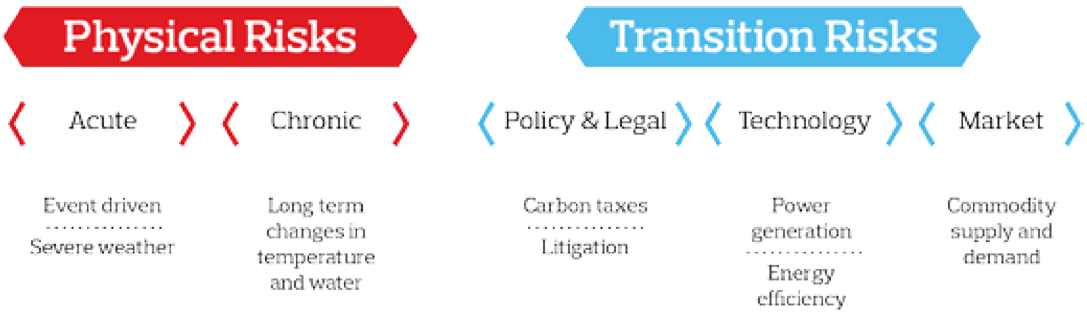
6 *http://www.aon.com/risk-services/thought-leadership/report-rmi-insight-nov-2015.jsp*

Physical vs. Transition Risks

The first set of risk the TCFD address is physical climate risk. These are the changes in the frequency and severity of climate driven events and the associated physical damages they have on organisations and the wider economy. The recommendations segment physical risk into acute (floods, windstorms, etc) and chronic (drought, water shortages, sea-level rise). The insurance industry has a solid understanding of both risks and can provide:

- Probabilistic modelling that puts a financial value on expected natural catastrophe losses.
- Data visualisation to understand where concentration of risks sits.
- Risk engineering to reduce the vulnerability of the risk.
- Alternative and parametric solutions that can transfer some of the more difficult acute catastrophe shocks as well as chronic climate risks.

Transition risk is defined as legal, policy, and technology risks, and to a lesser extent, market and reputational risk. The report underlines the risk of a 'disorderly' economic transition if the world is to shift to a low-carbon energy system. Unlike physical risks, transition risk is multifaceted and complex, although it is possible to use stress-tests, such as the Lloyds' Realistic Disaster Scenarios, to asses and quantify such risks. The TCFD is principally concerned with the way particular sectors are valued based on current emissions and/or commodities reserves compared to the policy commitments made by various governments and in the Paris Agreement. From an insurance perspective, these would largely be casualty risks, though the complexity of assessing and measuring this type of risk makes it a more challenging disclosure to address.



Sector Implications: Financial and Non-Financial

The TCFD segments sectors as either financial or non-financial. The financial sector is divided between:

- Banks
- Insurers
- Asset Managers
- Asset Owners

Non-financial businesses are classified as:

- Energy
- Transportation
- Building and Materials
- Agriculture/Food/Forest Products

The non-financial sector specific guidance is focused on capital intensive businesses or businesses that have a critical exposure to weather. Examples include manufacturers, real estate developers and managers, and food production.

Sector spotlight: the insurance industry

For the re/insurance industry specifically, the report asks for disclosure from both the underwriting and investment arms of re/insurers and suggests greater collaboration between the two would be useful. Re/insurers are specifically asked to disclose how climate risk could change liabilities across a range of lines and under different climate scenarios, suggesting expansion of existing financial disclosure. The ClimateWise Principles, Sustainability Accounting Standards Board, and UN Principles for Sustainable Insurance are all cited as aligned disclosures.

Using Proven Analytics to Drive Scenario Analysis

Scenario analysis is suggested as an approach to assess and quantify uncertainty in their disclosures. These scenarios could be changes in global temperature averages above and below 2 degrees centigrade, a range of carbon prices/taxes, or specific changes in demand for a fuel type. These scenario analyses have a basis in stress-testing, a tool insurers already use to account for capital reserves.

However, tools and methodologies of insurance analytics, such as catastrophe modelling and data visualisation, do exist as a starting point for organisations to consider scenario analysis.

Tools and methodologies, such as catastrophe modelling and data visualisation, are the first step for insurers to assess and quantify uncertainty. Insurance analytics constantly progress - with more detailed model resolutions, a greater number of perils covered in more geographies, and refinement of data across portfolios. **While these tools have traditionally been used by the (re)insurance industry for assessing risk in a portfolio of exposures, they can also be utilised by other organisations to quantify and manage catastrophe risk from climate perils such as windstorms and flood, but also other perils ranging from earthquakes to terrorism and pandemics**, and take a view on how this risk might evolve.

For non-insurers, uncertainty around climate projections is acknowledged by the TCFD as a challenge to measure and disclose. However, these tools—couples with machine learning and utilising algorithms to continually improve software platforms—holds great potential for insurance analytics to become a primary tool for organisations to assess climate risk and associated disclosure.

Avoiding Potential Liability Risks

Aside from disclosing liability risks the report also raises questions of potential liabilities for organisations who do not disclose under the guidelines. Despite increased political uncertainty, the general direction of travel suggests it is likely some governments may put the TCFDs recommendations into place. Even where the recommendations remain voluntary, increased interest from **investors may put pressure on organisations to disclose**.

A key question is whether the TCFD report itself is considered material if there were to be significant climate related financial impacts on an organisation. The UN itself has published a report on the relationship between environmental, social, and governance (ESG) issues and **fiduciary duty**. Businesses should check the applicable regulations on materiality and fiduciary care in the jurisdictions in which they operate. From a risk management perspective, whether climate related liabilities would be covered under D&O policies varies from policy to policy.

Next Steps Towards a Safer and More Secure Future

No longer just a corporate social responsibility issue, climate risk is being framed as a material risk to the financial system. Several of the taskforce members have committed to disclosing as per the recommendations in their financial reports.

Many organisations may not be in a place to report in the near future, but the FSB expects widespread adoption of the recommendations over the next 3-5 years.

Getting ahead of the curve can bring **better decision making to businesses for managing their existing physical assets as well as future planned investments**. Businesses can start now by:

1. Bringing together their sustainability, risk, insurance, and finance leaders to discuss the recommendations in the report. Collaboration is key.

2. Consider how you would measure and report on your exposure to physical climate risk. Are you modelling the probabilistic losses of your physical assets? How might climate scenarios affect these?

3. Speak to Aon about how your acute and chronic meteorological risks can be measured. Is there sufficient contingent capital?

4. Understand how climate risk liabilities are covered by your D&O policies

5. Seek legal advice on the long-term implications of the recommendations on your organisation.

Risk management is at the heart of sustainability. Innovations in risk management are making it possible to address and deliver climate risk disclosure to safer and more secure businesses, economies, and societies.

Further Reading

Aon Benfield (2015), 2015 Annual Global Climate and Catastrophe Report, http://thoughtleadership.aonbenfield.com/Documents/20160113-ab-if-annual-climate-catastrophe-report.pdf

Aon Global Risk Consulting (2015), Aon Risk Maturity Index Insight Report, http://www.aon.com/risk-services/thought-leadership/report-rmi-insight-nov-2015.jsp

Beniert, Sven (2014), Extreme Weather Events and Property Values: Assessing New Investment Frameworks for the Decades Ahead, http://europe.uli.org/wp-content/uploads/sites/3/ULI-Documents/Extreme-Weather-Report-20141.pdf

ClimateWise (2016), Investing for Resilience, http://www.cisl.cam.ac.uk/publications/publication-pdfs/Investing-for-resilience.pdf

Financial Stability Board (2016), Recommendations of the Taskforce on Climate Related Financial Disclosures, https://www.fsb-tcfd.org/publications/recommendations-report/

Koh, Jay; Mazzacurati, Emilie; Swann, Stacy (2016), Bridging the Adaptation Gap: Approaches to Measurement of Physical Climate Risk and Examples of Investment in Climate Adaptation and Resilience, http://climatefinanceadvisors.com/wp-content/uploads/2016/11/GARI-2016-Bridging-the-Adaptation-Gap.pdf

Standard and Poors Ratings Direct (April 2015), Climate Change Will Likely Test The Resilience Of Corporates' Creditworthiness To Natural Catastrophes

Standard and Poors Ratings Direct (September 2015), The Heat is On: How Climate Change Can Impact Sovereign Credit Ratings

United Nations Environment Programme (2015), Fiduciary Duty in the 21st Century, http://www.fiduciaryduty21.org/

Contacts

Gregory Lowe
Global Head of Resilience and Sustainability
Aon plc
+44 (0) 7825 263 557
greg.lowe@aon.com

About Aon

Aon plc (NYSE:AON) is a leading global professional services firm providing a broad range of risk, retirement and health solutions. Our 50,000 colleagues in 120 countries empower results for clients by using proprietary data and analytics to deliver insights that reduce volatility and improve performance.

www.aon.com

GDM01516

Empower Results®