Bulletin

The dollars and sense of climate risk

Building a business case to confidently manage climate-related risks and opportunities

Climate change impacts will continue to unfold across Australia with increasing severity in the years ahead. This will result in a set of complex and material financial implications for business. For Australian business to confidently rise to the challenge of systematically measuring, managing and mitigating risks and opportunities of climate change it will need a sound understanding of how climate change will most likely impact its finances. This Bulletin discusses Frontier Economics and Edge Environment's approach to extending climate risk frameworks to build business cases for climate response against the inevitable, and potentially disorderly, climate transition ahead.

Australia is in the midst of cascading and compounding climate impacts

After centuries of relative climate stability, the world's climate is changing. As average temperatures rise, acute hazards such as floods and fires and chronic hazards such as drought and sea level rise intensify. These hazards are categorised as the physical risks of climate change.

The frequency and severity of weather events in Australia is increasing and may further intensify as ecosystems are pushed beyond tipping points. Recent weather events in Australia such as the unprecedented rainfall and flooding in South-East Queensland, New South Wales and Victoria, extreme heat in Western Australia and the 2019–20 bushfires have resulted in highly significant financial losses for businesses and the communities they operate in.

Climate risk, however, remains an emerging discipline compared to other traditional risk areas. Climate risk management will necessarily grow in importance over coming years – recently, the Australian Prudential Regulation Authority (APRA) warned business around the need to prepare for "rapidly increasing expectations" on climate risk disclosure.

Against this backdrop, forward looking businesses are taking steps to understand, quantify and manage their climate risk exposures.

TCFD is a lens to grapple with these risks

The Taskforce on Climate-related Financial Disclosures (TCFD) reporting framework has emerged as the global benchmark in climate risk reporting. It seeks to make businesses' climate related disclosures comprehensive, consistent and transparent. TCFD enables effective investor analysis of a company's demonstrated performance of incorporating climate related risks and opportunities into businesses' risk management, strategic planning and decision making.

The TCFD was set up in 2017 by the Financial Stability Board – an international body of regulators, treasury officials and central banks – to provide voluntary recommendations on how business could voluntarily disclose the risks and opportunities from climate change (see Box 1).

Momentum in the market is growing and norms are being set

Since being first published in 2017, TCFD has been rapidly adopted by a broad range of organisations across the globe – the 2022 status report for TCFD points to TCFD "support" encompassing US$220 trillion of assets and US$26 trillion of combined company market capitalisation.

There is a trend towards mandating climate-related disclosures. Mandatory climate risk disclosures have been announced in jurisdictions including the UK, the EU, Hong Kong, Japan, Singapore and New Zealand. Significantly, the United States Securities and Exchange Commission has proposed rules to enhance climate-related risk disclosure drawing from the TCFD recommendations. Collectively, these actions will set norms and expectations for Australian businesses to develop their own disclosures.

In 2021 the New Zealand Government passed legislation mandating climate-related disclosures for around 200 financial entities. Further to impacting those covered by the introduction of this mandate, the move is widely expected to act as a catalyst for increased climate-related disclosures across businesses operating in the wider New Zealand economy.

Box 1: TCFD in brief

The purpose of TCFD is to provide a framework for organisations to make consistent and transparent climate-related financial disclosures. The TCFD framework document provides the following overview of the types of disclosures that it recommends:

- **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.

It is recommended that the business provides its disclosures in their public annual reporting.

Source: Recommendations of the Task Force on Climate-related Financial Disclosures

Decision making under complexity needs tangible financial analysis

While TCFD is ultimately intended to support more informed capital allocation by investors, it can also be an important tool for organisations to respond to the risks and opportunities of climate change.

For an approach to inform practical decision making it needs to provide climate-related impacts in financial terms:

- In the case of climate risks, the approach would allow for adaptation, mitigation and divestment intervention options to be directly compared to a "do nothing scenario";

- It would facilitate the valuation of climate-related opportunities, such as, product innovation, renewable energy generation, water recycling, resilient supply chains, and cost savings in energy or resource use; and
- The approach will be flexible to recognise that risks and opportunities will vary depending on the region, market and industry that the business operates in.

Clearly this is a complex task, but it needn't be daunting if we have the right tools and systematic approaches. Finding a solution requires assessing the changing climate exposure and vulnerabilities of an enterprise through time. A collaborative approach which brings together the key stakeholders across an enterprise provides the means to map the material climate impacts, their drivers and the likely financial consequences to the company. This collaborative approach also enables joint ownership of critical uncertainties to be addressed within business' operations, financial reporting and data management. A structured approach is then required to cut through the uncertainty and deliver a clear path forward to adequately measure, manage and mitigate climate risks.

Frontier Economics and Edge Environment have partnered to combine our skills in financial analysis, ESG, risk management, climate science and sustainability to work through this complexity (see Box 2).

A collaborative approach is required to address this complexity

Confident climate-risk decision making requires a multi-disciplinary approach, incorporating climate science and financial analysis. However, deep technical expertise alone is not sufficient.

There is also a need for broad buy-in and engagement from within and across an organisation in order to access information, form granular insights, identify key operational climate-related impacts and quantify financial consequence. Organisations are encouraged to systematically look beyond the acute and direct impact of extreme events but also to the aggregated impacts of chronic and indirect effects of climate extremes.

Even with all these elements, it can be difficult to know where to start a climate-related financial analysis.

Box 2: Frontier Economics' partnership with Edge Environment

Edge Environment and Frontier Economics have worked across a broad range of climate risk and resilience projects, mostly within the property, infrastructure and government sectors. Together, this partnership provides a unique opportunity to better understand both financial risks and opportunities of climate change for Australian and New Zealand businesses.

Edge is a specialist sustainability services company focused on Asia-Pacific and the Americas. Its teams are based in Australia, New Zealand, the United States and Chile. Edge exists to help its clients create value from tackling one of world's most fundamental challenges: creating truly sustainable economies and societies. Edge does this by combining science, strategy and storytelling in a way that gives clients the confidence to take ambitious action, and do well by doing good

Frontier Economics and Edge have developed a practical approach

A useful starting point in analysing climate-related risk and opportunities is to assess the impacts of recent extreme climate events – such as the Eastern Australia bushfires and drought of 2019-20 and the extreme rainfall of 2021-22 – on a business' operations and related cashflows.

This "*looking back to look forwards*" approach provides multiple advantages. It allows the:

- development of logic maps, from climate drivers to asset and operational impacts;
- identification of related notional financial consequences; and
- engagement from across the business on climate-related risks and opportunities.
- Shared understanding of the constraints and limitations in financial data management which may need to be addressed to enable the aggregated costs of climate impacts to be assessed with confidence

The logic mapping and notional financial consequences can then be tested and validated using actual operational and financial data to identify the impacts of recent extreme events.

This approach also clearly highlights any data gaps which limit the extent to which financial consequences can be isolated – providing insight to improve risk management systems.

This baseline analysis has standalone value as it provides a snapshot of the resilience of an organisation to recent climate change events which can be linked back to materiality thresholds in a firm's enterprise risk framework. It is also vital in building a foundation for robust and defensible scenario analyses of the likely impacts of future climate extremes on an enterprise. It can be used to inform forward looking analysis of climate change impacts, which considers both cash flow and asset valuation risks and opportunities.

The approach taken by Frontier Economics and Edge Environment focusses on undertaking robust, transparent and actionable analysis. For example, we focus first on the short-term (to 2025) before extending analyses further into the future. A short-term lens reduces uncertainty and allows organisations to home in on impacts which require urgent action. It also allows for extensions such as cost-benefit analysis to support investment decisions around certain interventions.

Building the business case to confidently make decisions about managing your organisations climate risk is a journey – come and talk to us about getting started.

Figure: Logic map framework

Climate driver	Asset impacts	Operational impacts	Material financial impacts
• Hazards • Exposure • Trends • Extremes	• Vulnerability • Damage • Repair • Valuations • Insurability	• Delays • Continuity • Reputation • Supply chain • Health, Safety, Environment	• Cash flows

Contact Us

Frontier Economics has been providing independent advice to businesses, regulators and governments for over 20 years. From offices in Australia and Singapore, our team has a diverse range of skills and experiences to support the needs of our clients.

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