



A STRESSING CLIMATE?

KEY CHALLENGES FOR BANKS
IN ASSESSING AND DISCLOSING
CLIMATE CHANGE RISK

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NEW RECOMMENDATIONS FOR FINANCIAL DISCLOSURE

Companies in all sectors, including those in the financial-services industry, are being asked the same question: What are the implications of climate change risks and opportunities for your organization's financial performance? Investors, regulators, consumers, suppliers, and employees are looking for greater clarity and transparency on this issue. At this stage, however, there's no established best practice for assessing the impact of climate change on bank performance. This topic has not escaped the focus of central bankers, specifically Financial Stability Board (FSB) Chair and Bank of England Governor Mark Carney, who has written and spoken extensively on climate change risk. The recent release of a disclosure framework aims to facilitate the process; yet companies—particularly financial institutions—face a number of challenges in implementing the recommendations.

The FSB Task Force on Climate-related Financial Disclosures (TCFD), issued a set of recommendations in June 2017, providing a framework and approach for all companies to report on climate impacts in their mainstream financial filings.¹ The disclosures, which are meant to be voluntary, consistent, comparable, reliable, and clear, should aim to provide material information to lenders, insurers, investors, and other stakeholders. This disclosure of the financial impact of climate-related risks will push institutions to enhance how these risks are assessed, priced, and managed. To that end, banks and financial institutions are particularly encouraged to adopt the recommendations.

SCENARIO ANALYSIS TO ASSESS CLIMATE RISKS AND OPPORTUNITIES

In adopting the TCFD recommendations, financial institutions will need to embed the impact of climate change into their strategy, risk, and opportunity analyses. These analyses should consider the physical risks stemming from climate change in the physical environment, the transition risks associated with the economic costs of moving to a lower-carbon economy, and the opportunities for developing new products and services in response to climate change. The TCFD recommends using scenario analysis to support this exercise – including the consideration of a 2-degree Celsius (or lower) global temperature-warming scenario aligned with the 2015 Paris Climate Agreement.

Scenario analysis is a well-established method to inform strategic plans and ensure resiliency to a range of future states. The use of scenario analysis to assess the implications of climate-related risks and opportunities for companies, however, is recent.²

Organizations need to consider a range of scenarios relevant to their businesses. Alongside the Paris Agreement scenario (where a rise in global temperatures is limited to 2-degree Celsius by 2100 but significant transition risks arise from the economic adjustment needed to limit the temperature increase), scenarios with higher degrees of warming are typically considered to further stress the physical risks of climate change (such as a 3-degree Celsius scenario, which is broadly aligned with the current Paris commitments, and a 4-degree Celsius or warmer scenario that reflects the current temperature pathway if countries do not follow through on their commitments).

1 In late 2015, at the request of G20 leaders, finance ministers, and central bank governors, the Financial Stability Board (FSB) established an industry-led task force under the leadership of Michael Bloomberg. The task force was charged with developing voluntary, consistent climate-related financial risk disclosures for use by companies in providing information to investors, lenders, insurers, and other stakeholders. To learn more, see: <https://www.fsb-tcfd.org>.

2 Mercer first introduced this approach with its 2011 report, *Climate Change Scenarios – Implications and Strategic Asset Allocation*, followed by its 2015 study, *Investing in a Time of Climate Change*.

Each scenario must include a set of coherent variables and a narrative explaining the underlying rationale for the values and trends of the variables, as well as the interdependency between them. These variables can include assumptions on policies and regulatory developments (regionally, domestically, and internationally), the pace of technological change, the sea-level rise, and how these disruptions may positively or negatively impact industry sectors and supply chains. Along with this, organizations need to develop a methodology capable of translating scenario variables into a financial impact. A fine balance is needed to thread the complexity of the processes and analyses so as to ensure realistic implementations and executions of scenario planning and assessment.

CHALLENGES IN DEVELOPING EFFECTIVE CLIMATE SCENARIOS

There are a number of challenges in developing effective climate scenario analyses to support management in reaching actionable decisions. For example, the banking sector faces four key challenges in developing climate scenario analyses for their wholesale exposures.

1. **Time horizon** – The disconnect between the typical time horizon of risk analyses and the longer-term climate forecast horizon.

Time horizon is a key challenge when modeling the impact of climate change on bank performance, as the impacts will materialize over a longer time frame than banks typically consider in their processes and tools:

If retaining a short-term view of the climate scenario (such as three-to-five years, which is similar to stress-testing or planning horizons), there will be a limited impact, as the biggest impacts are expected in the medium to long term (15 years). Importantly, this information set will not help banks drive strategic changes until conditions materially worsen.

If retaining a longer-term view (roughly 25 years), forecasting income statement and balance-sheet views requires modeling anticipated changes in the portfolio

composition, business models, and financial structure of the institutions. Results will be subject to multiple assumptions (scenario, portfolio evolution, and sector evolution), complicating their interpretation, significantly increasing uncertainty, and decreasing comparability between banks.

There are two main implications:

1. Comprehensive sensitivity testing of potential credit losses is more relevant and appropriate at this stage than a full-blown, firm-wide, holistic stress-testing exercise that would cover losses, revenues, and capital. Such sensitivity testing can help banks assess the exposure under alternative portfolio constructs and business strategies and therefore drive decision making. While holistic stress testing may someday be useful, at the moment, it introduces greater uncertainty into forecasts and complicates an interpretation of the results.

2. Existing models will require adjustment and/or new models will be necessary to accommodate the longer-term time horizon.

2. **Data availability** – Data gaps for assessing climate impacts on credit risk.

Banks currently do not have comprehensive, deal-by-deal climate-risk assessments across the portfolio and often have only very limited relevant climate attributes of their borrowers. Moreover, in contrast to traditional macroeconomic stress testing where a model can be calibrated and back-tested against previous crises or economic environments, climate modeling lacks the necessary historical empirical data since the most critical and material effects of climate change have yet to be observed (although this is changing, with the increase in extreme weather events, as well as a series of bankruptcies in the coal sector).

There are two main consequences:

1. Given the limited availability of borrower-level climate attributes, a sector-level analysis is – at this early stage – a more efficient way to capture the main sensitivities of the organizations to transitional risks. Supplementing the sector-level

methodology with select borrower-level analyses helps to calibrate the approach and increase conceptual soundness.

2. Given the lack of empirical loss data related to climate change, banks must make use of expert judgments, which are subjective.

3. Coordination and organization – Integrating cross-functional capabilities and expertise across the bank.

Climate-related analysis and disclosure calls for integrating expertise and capabilities from various departments within a bank, such as:

1. Sustainability leaders, who are often subject-matter experts on climate change and understand the potential impact and nuances of different scenarios.

2. Credit-risk experts with an understanding of the drivers of borrower credit losses and the bank's credit portfolio.

3. Stress-testing teams, who understand different approaches to sensitivity analysis and stress testing and can build and/or run the stress-testing machinery.

4. Strategic planning units, which can incorporate information on climate risks, sensitivities, and opportunities into planning processes and strategic decision making (this may include decisions that limit the financing of certain types of activity, such as coal-fired power generation and the launch of "green" products and services).

5. Finance and/or investor communication leaders who can frame and detail disclosures, with support from management and the board.

Achieving the coordination needed across these teams to create a collective output will challenge the existing organization, governance, and processes but is necessary for delivering a robust climate strategy for the years ahead.

4. Modeling uncertainty – Implications of significant uncertainty in modeling on scope of climate disclosure.

As the challenges highlight, there are significant limits to anticipating the financial impact of climate change accurately. Given those bounds, companies and financial institutions will need to carefully determine the extent of their disclosures. Insufficient information may not provide investors with a transparent view of the risks and could fail to meet expectations of the TCFD, as well as regulators. However, disclosure of uncertain information may also mislead stakeholders and be inconsistent with the TCFD's articulated principle of reliable disclosure.

MOVING AHEAD WITH MANAGED EXPECTATIONS

Organizations are expected to show prudence in framing and detailing disclosures to ensure the information provided is properly understood by the market. Initial discussions with leading banks suggest that the robustness of disclosures will evolve over time as financial institutions refine their climate-related underwriting and risk-assessment practices while corporates, in parallel, enhance their disclosures to reflect climate risks and resiliency strategies.

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