

CLIMATE RISK

Banking supervisors, including the Federal Reserve Board, Office of the Comptroller of the Currency, and Basel Committee on Bank Supervision, have identified climate risk as a key risk for financial institutions to consider in their risk management frameworks. The Securities and Exchange Commission has articulated the need for appropriate disclosures related to institutions' exposure to climate risk.

Financial institutions are exposed to climate risk through physical and transition risks:

- **Physical risk** refers to the physical damage caused by severe weather events or climate shifts. Recent fire- and weather-related damages in the western and southern United States have damaged many properties, devastated infrastructure, and caused supply chain interruption.
- **Transition risk** refers to changes in climate and energy policy, technology, or customer behavior as a response to lower carbon policy. In addition, investors are driving companies to transition to more sustainable energy sources. Major automakers are rolling out programs to phase out gas-engine cars. Energy utilities are retiring coal plants and redoubling investment in renewable energy, efficient clean fuel generation, battery storage, and resilient transmission and distribution.

Risk Identification

When executing risk identification processes, financial institutions should incorporate how policy changes related to climate change may impact their risk profiles. For example, as the US looks to move to zero carbon emissions by 2050, financial institutions will shift their desire to lend to a borrower who may be seen as a high-carbon emitter. These policy changes can impact the financial institution's reputation, income, and liquidity. Similarly, as more severe weather events cause property damage, collateral becomes devalued and the borrower's ability to repay the loan is diminished, leading to loan defaults and lender liquidity impairment.

How material will these risks be, and how will they manifest and impact financial institutions? Banks may struggle at first with acquiring data within the bank's systems to conduct detailed analysis, but with the help of external data providers and outside advisers to supplement data gaps, they will develop reasonable risk assessments to define the materiality of climate change risks to their institution. Similar to the early days of risk identification and stress-testing processes, banks likely will find these processes and estimates to be less precise than recent Comprehensive Capital Analysis and Review exercises.

BRG professionals have extensive experience in banking, climate change, energy, and information technology to assist in making the process more manageable and useful. Our team of experts can model the impacts of physical risk (e.g., wildfires and extreme cold, similar to the recent experiences in California and Texas) and the impact of policy changes being considered by worldwide governments.

We believe, however, that banking supervisors are looking at climate risk as another element of scenario analysis, rather than as an element of the supervisory stress-testing process.

Scenario Analysis

A scenario analysis of a risk element from climate change is an informative and important way for financial institutions to gain insight on the impact of this risk type. Scenario analysis allows risk managers to conduct what-if case studies on financial and operational impacts, while building a more robust dataset and more sophisticated models with a team of experts. The resulting analysis leads to a thorough evaluation of the financial implications and impacts if these risks were to materialize.

Given the nascent nature of climate change scenario analysis for banks and the limited understanding of the true impact climate risk may have on financial institutions, a useful method to conduct these analyses may involve a series of scenario analysis workshops. In a workshop, the financial institution gathers subject-matter experts (SMEs) to diagnose how an event or series of events could impact the institution. The SMEs can provide context of how customers, markets, or the bank's own operations may react to the scenario events, as outlined in the workshop.

Financial institutions can take this information and create a roadmap of scenario events to assess financial impact and contingency planning to address how the financial institution may need or want to respond to the events. There will be a desire to be precise with financial projections and contingency plans, but financial institutions should remember that these are imperfect exercises; it is unlikely that a scenario will play out exactly as detailed in the scenario analysis workshop.

BRG professionals have led scenario workshops for banks and can bring the experience of our experts across banking, climate, and energy, together with datasets and models to assess the impact of climate change in climate policy on a bank's balance sheet and income statements. Through these workshops, we can identify contingency plans to mitigate losses, preserve liquidity, and adjust portfolio positions to ensure banks are prepared for regulatory and environmental and sustainability governance (ESG) investor scrutiny.

A scenario analysis should lead to a series of impact assessments and potential actions that the financial institution can take in the event the scenario materializes. These outcomes should be provided to management and the board to offer context and direction as to potential impacts of climate change on the institution. As events and climate change policies become clearer, financial institutions can refine their analysis and roadmaps to address the ever-evolving climate change environment.

Banking supervisors are monitoring energy policy discussions carefully across the fossil fuel and electricity industries to inform policy direction to address climate change risk in the banking industry. Prospective policies under debate throughout North America, Europe, and Asia include net-zero targets for energy-sector greenhouse gas emissions; carbon taxes on companies to assist in the reduction of climate change and promote a transition to renewable and nuclear energy; removal of fossil fuel subsidies; increased renewable energy and electricity storage subsidies and research and development programs; energy infrastructure components of fiscal stimulus; and other measures.

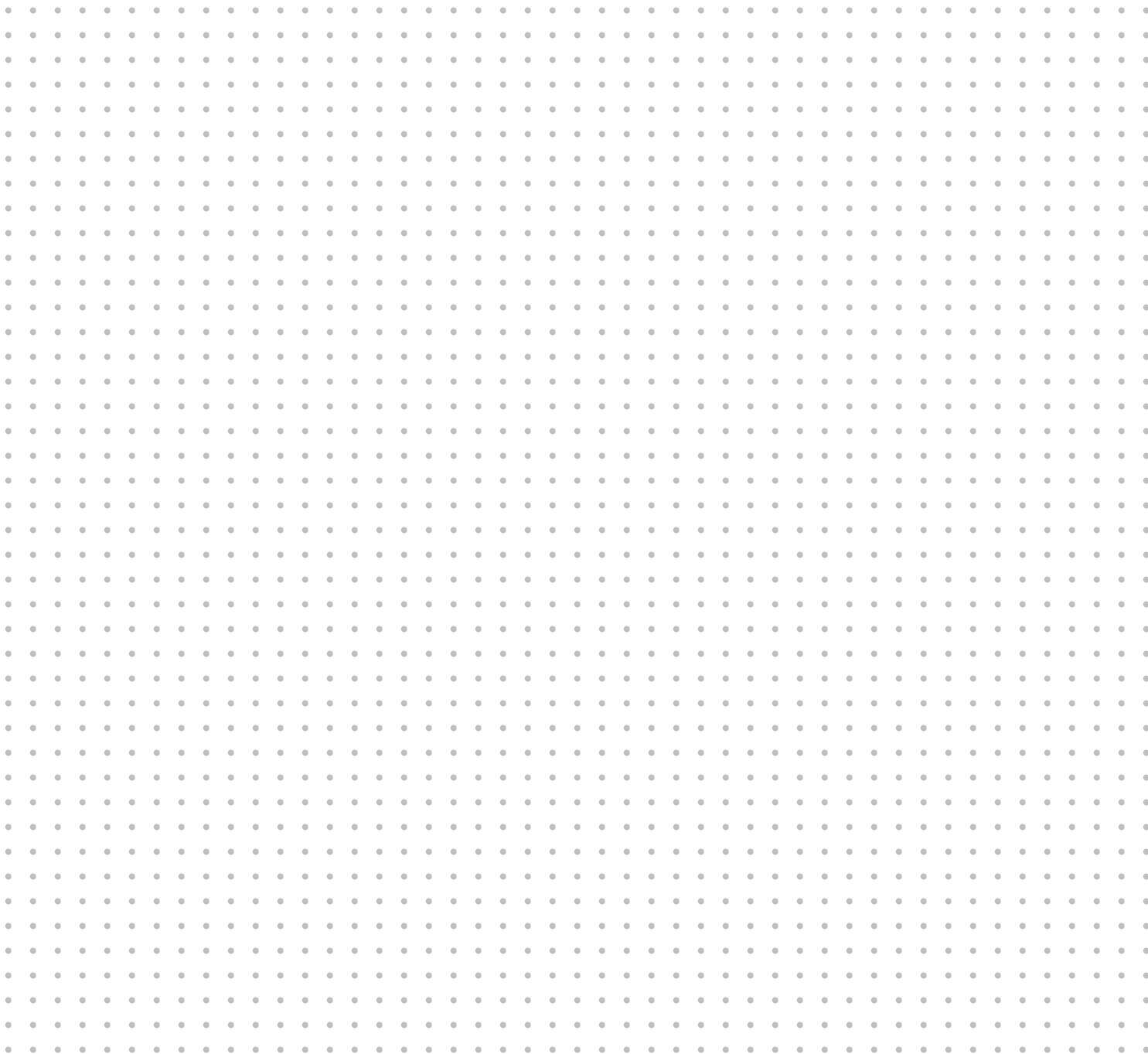
Bank ESG governance structures should evaluate the likely impacts of these potential policies thoroughly as they look at the creditworthiness of borrowers and consider the application of the taxes on borrowers' cash flows. For example, while energy regulators and fiscal authorities are considering imposing carbon taxes, bank regulators likely also will look to make loans to high carbon emitters more expensive to banks through increased capital weights in the risk-based capital calculations. Naturally, banks should and probably will pass these costs to the borrowers, further pressuring the energy industry to promote renewable energy and reduction of carbon emissions.

Regulators also will look to see a bank's comprehensive plan to address climate change risk in its portfolios. This will include portfolio and loan analysis on the cost of the loans, the impact of climate scenarios on the bank's financial position, and contingency plans the bank developed to address these risks. We anticipate that these reviews will look similar to the review of banks' capital plans, with more emphasis on the contingency plans themselves rather than the explicit quantitative impacts.

How BRG Can Help

BRG can assist financial institutions with executing their climate change scenario analyses and developing contingency plans to address the underlying climate change-related physical and transition risks in the bank's loan portfolios. Specifically, BRG can work with your institution to:

- Conduct risk identification processes
- Conduct scenario analysis workshops
- Provide datasets and models to supplement bank data and create more substantive analyses
- Provide economic support to inform scenario design
- Execute financial and operational analysis
- Develop contingency plans
- Assist in establishing environmental and sustainability governance structures



About BRG

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