



# Actions to Operationalize Your Climate Risk Framework

## A Guide for Banks Starting Their Climate Journey

Climate risk management is a developing field with many practical challenges. Banks can take important steps and make meaningful progress toward developing climate capabilities and, overall, operationalizing their climate risk journey.<sup>1</sup>

This document outlines potential areas of focus in operationalizing climate risk, set within the context of evolving climate risk classifications and taxonomies.

1. **DISCLAIMER:** This paper is intended to help a firm develop climate risk management capabilities to address evolving industry standards and heightened regulations as and when they evolve. This paper is not intended to express a view regarding what should be long-term industry standards or the target regulatory environment.

## SECTION 1

# Climate Risk Defined

Climate risks are financial and non-financial risks due to environmental factors, including factors potentially resulting from climate change and other environmental degradation. Climate risk factors may affect the profitability, capitalization, or liquidity of a bank.

Climate risk may be direct or indirect. Examples of direct impacts are business disruptions due to severe weather effects on physical plant, on IT and communications networks, and on customer or employee mobility and access. Examples of indirect impacts are climate-related credit losses, change in customer demand for bank services, or changes in the bank's reputation.

Climate risks are further classified as physical or transition risks (see Figure 1):

- Physical risks are from negative effects of climate change or other environmental factors. Typical physical risk drivers are acute weather events such as extreme hurricanes, wildfires, and flooding or chronic changes in weather patterns with long-term impact on a firm's operations, supply chain, or demand for its products and services.
- Transition risks are from potential negative effects of the transition to a low-carbon, climate-resilient, or environmentally sustainable economy. Typical transition risk drivers include changes in government policy (e.g., carbon tax), technological improvements that reduce carbon emissions, and changes in consumer behavior toward sustainable products.

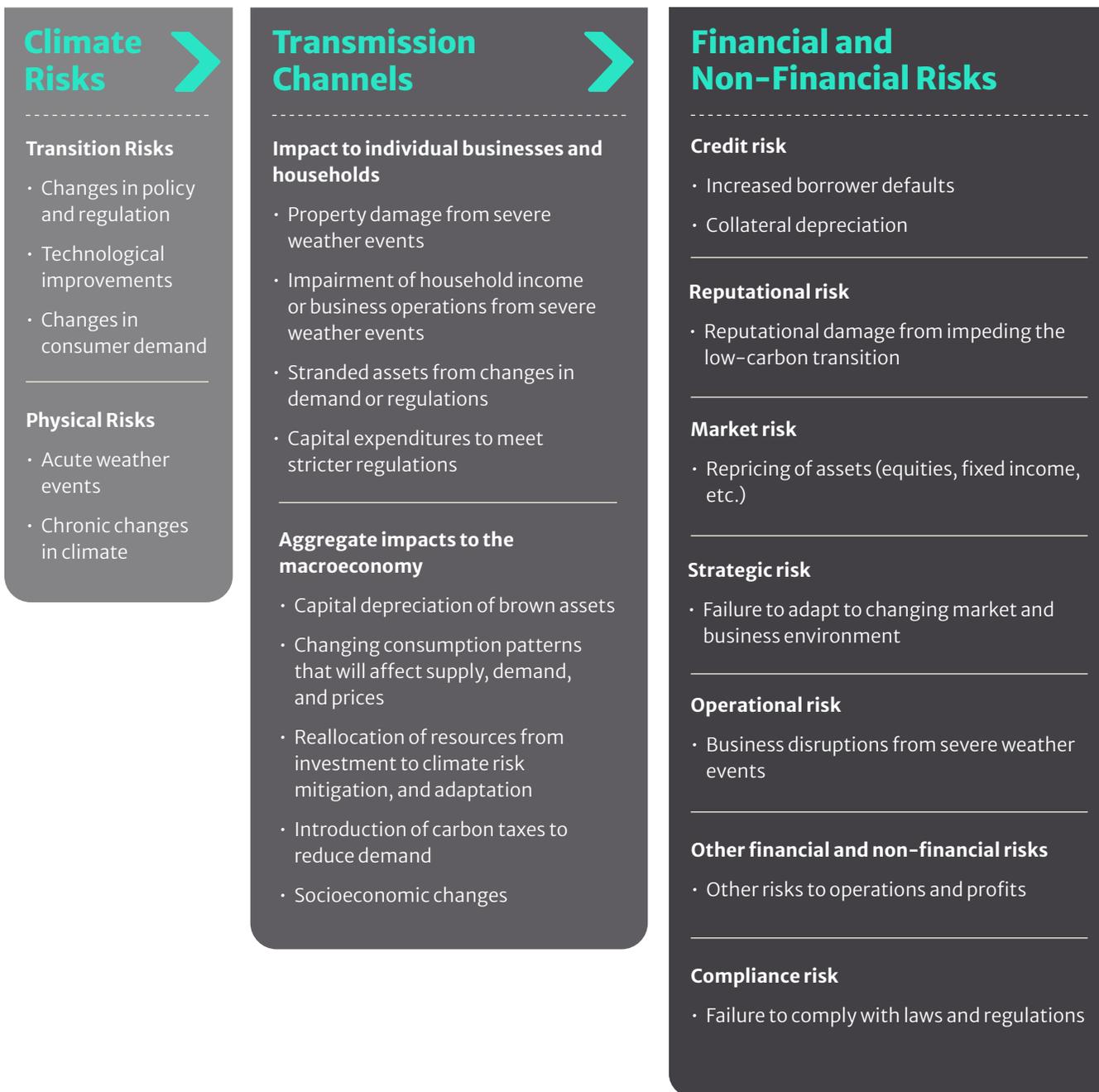
**Figure 1:** Climate Risk Categories



# 1.1 Climate Risk as a Transverse Risk .....

Climate risk is viewed as transversal, meaning that its impact may be transmitted through other financial and non-financial risk categories such as credit, market, liquidity, and operational risks, i.e., the so-called “pillar risks” (see Figure 2). Many institutions are currently considering how to embed climate risk in the management of each pillar risk.

**Figure 2: Transmission Channels: Climate Risks to Financial and Non-Financial Risks<sup>2</sup>**



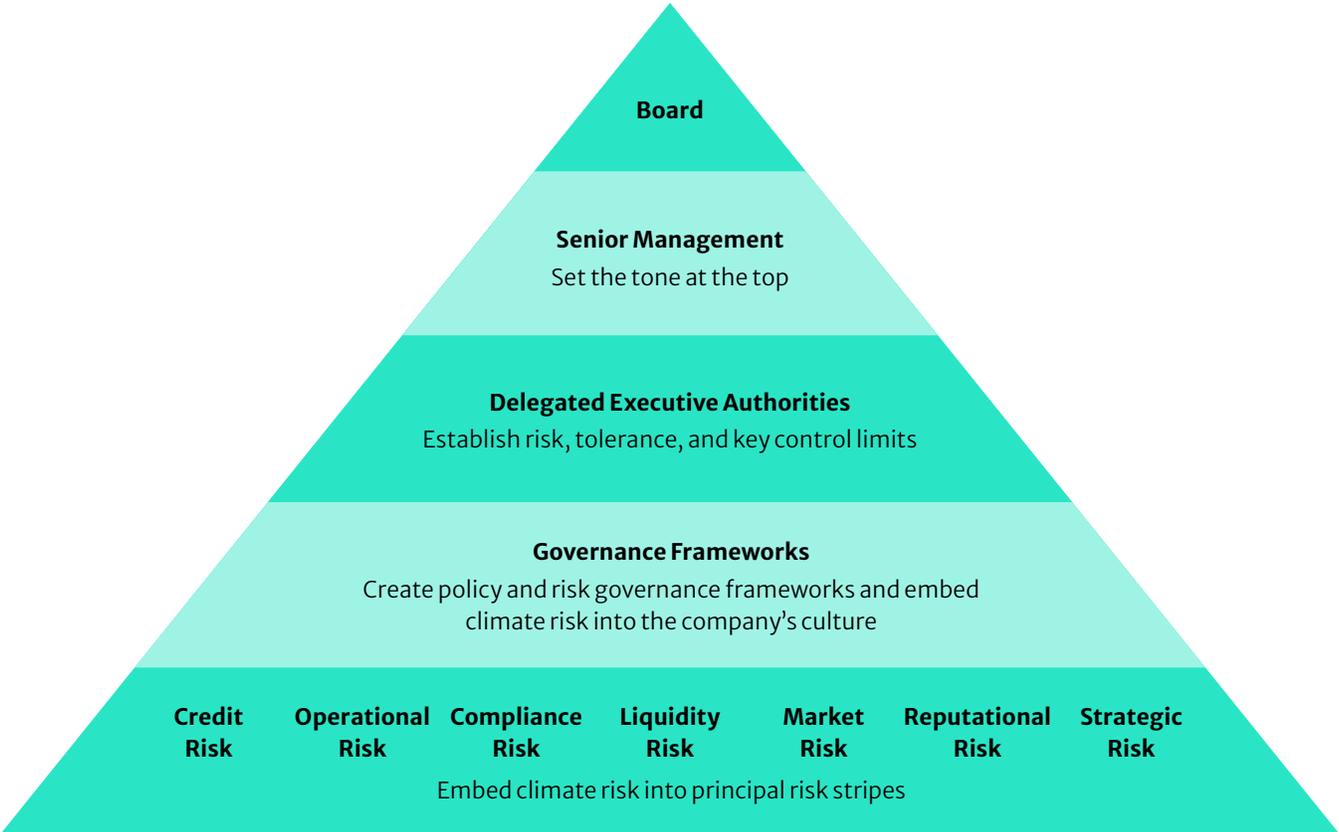
<sup>2</sup> See “NGFS (2021). NGFS climate scenarios for central banks and supervisors” for further details regarding financial risks.

# 1.2 Climate Risk Governance .....

Firms seeking to build climate risk management programs should consider how to incorporate climate risk into their risk management frameworks. Changes to consider include the following:

- A definition of climate-risk appropriate to the firm and its exposures
- An articulation of the enterprise-wide approach to climate risk
- Board or board committee oversight responsibilities
- Senior management oversight responsibilities
- Reporting requirements to board, board committees, other governance committees and senior managers
- Amendments to the roles and responsibilities of risk management units

Figure 3: Impact of Climate Risk on the Governance Framework<sup>3</sup>



<sup>3</sup> KPMG (2022). Operationalizing climate risks: Mitigating new and rising regulatory scrutiny.

## SECTION 2

# How Do You Start Your Climate Journey?

Early climate risk management efforts tend to focus on four large areas:

1. Governance and Risk Management Framework Enhancements
2. Scenario Analysis
3. Climate Metrics and Reporting
4. Factoring Climate Risk into Business and Control Decisions

In addition, firms are also considering the optimal change management governance arrangement for their unique circumstances, e.g., a climate risk implementation committee or program office charged with creating a pragmatic roadmap, designing detailed plans, and tracking execution.

## 2.1 Governance and Risk Management Frameworks

The following are key governance and risk management framework considerations to be explored, depending on a bank's unique position.

- **Governance Structure:** An enterprise-wide governance structure, including a risk management and controls framework, to oversee clear and transparent monitoring and reporting
- **Multi-Disciplinary Engagement:** Participation in the governance structure by members from a wide array of business areas and all three lines of defense
- **Board and Senior Management Roles:** Oversight, reporting and escalation processes, training
- **Measurement and Monitoring:** Data and data systems that can measure, track, and support external disclosures and performance claims; internal climate risk taxonomy
- **Integration in Risk Practices:** Integration of climate risk in risk disciplines; climate risk appetite that is consistent with the existing enterprise risk appetites

- **Documentation:** Policies and procedures; reports
- **Metrics and Monitoring:** Data collection, measurement, monitoring, and testing within each risk discipline; tracking against climate-related commitments, targets, and plans, where material and warranted

## Key Considerations and Challenges:

- **Enterprise-wide:** Consider an enterprise-wide governance structure
- **Consistency:** Adapt existing framework to foster consistency of definitions across the enterprise
- **Develop Relationships with Vendors:** Consider outside sources of data and/or third-party assistance to:
  - Identify and assess needs
  - Design, communicate, and operationalize the strategy
- **Benchmark vs. Competition:** Track peer group and market leader climate-risk approaches, where information is available, e.g., asset management disclosure permits detailed comparisons.

## 2.2 Climate Risk Scenario Analysis .....

Bank regulatory proposals include expectations for large banks to use climate-related scenario analysis. While the regulatory landscape is continuing to evolve, firms that are beginning their climate journey may want to consider exploring capabilities in scenario analysis both to support internal assessment of climate risk as well as to build expertise. Some key considerations are:

- **Internal Stakeholder and Governance Roles:** Identify the internal stakeholders and assign oversight and governance roles; where appropriate, leverage existing ESG or other governance players
- **Assess Capabilities to Associate Climate Risk with Accounting Items:** Consider requirements for producing the financial metric disclosures included in the Securities and Exchange Commission's climate disclosure proposal. Producing the proposed calculations could require granular mapping of the inventory of climate risk taxonomies (physical / transition) to balance sheet / income statement line items
- **Identify Concentrated Climate Risk Sources:** Identify the bank's assets that are highly vulnerable to climate-related risks, if any. Consider a risk-weighted approach to determine recommended levels of data granularity. Consider ability to identify high-risk asset characteristics with sufficient granularity (e.g., by associated economic sector, by geographic concentration, etc.). Consider ability to translate climate-related data into the climate-adjusted risk indicators on asset level (physical) and counterparty level (transition)
- **Leverage Publicly Available Scenarios:** Become familiar with publicly available scenarios, e.g., those of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS); consider selecting one(s) that best suits the exercise's scope, identified exposures, and defined parameters and assumptions

- **Consider the Aggregate/Strategic Implications:** Consider ability to evaluate potential impacts (key sensitivities) on the strategic and financial positions under each of the defined scenario(s) and provide feedback (e.g., regarding mitigations) to the scenario's analysis parameters
- **Documentation and Feedback:** Consider appropriate documentation of the process, inputs, assumptions, analytical methods, and outputs and communications to relevant parties and stakeholders

### Key Considerations and Challenges:

- **Climate Scenario to Economic Scenario Translation:** Common approaches include climate scenarios (e.g., greenhouse gas (GHG), emissions, climate physical scenarios by peril) and economic scenarios that capture effects of climate events on GDP, energy prices, etc.
- **Drivers, Assumptions, and Analytical Choices:** Define and evaluate relevant risk drivers (e.g., oil price), assumptions (e.g., mitigations), and analytical choices (e.g., granularity) to conduct a scenario analysis
- **Highly Granular Data Associations:** Unlike capital stress testing, city, county, or address level especially for physical risk assessments; according to an RMA survey, 53% of the organizations are sourcing the location data from third-party providers<sup>4</sup>

## 2.3 Build the Control Framework for Climate Metrics & Reporting

A growing number of financial services companies voluntarily assess and report their operations against a handful of frameworks developed by non-governmental groups (NGOs)<sup>5</sup> to shape disclosure related to climate-related risks and opportunities. Regulatory proposals, including the SEC proposal for climate-related financial disclosure, could raise standardization across requirements that are applied to definitions, data, and disclosures. This suggests the following two considerations.

- **Data and Reporting Controls:** As firms build their management and reporting capabilities for internal climate risk management purposes they do well to design and build with their data controls and data governance framework in mind. In this way, internal capabilities that support robust risk management should also facilitate compliance with future regulatory requirements for accuracy, completeness, consistency, and timeliness.<sup>6</sup> Figure 4 illustrates some common current challenges with data.

**Figure 4: Common Challenges with Climate Data**

Accuracy	Completeness	Consistency	Timeliness
e.g., Vendor/ company data mismatches	e.g., Limited data availability across metrics	e.g., Varying definitions, metrics, assumptions	e.g., No formal reporting cadence

<sup>4</sup> RMA (2021). Climate Risk Consortium – Range of Practice Survey.

<sup>5</sup> Such as the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD), the Global Reporting Initiative (GRI), and the standards of the Sustainability Accounting Standards Board (SASB). The recommendations of the TCFD are seen as the leading disclosure framework among the banks according to a KPMG survey performed in 2021 (KPMG (2021). Climate disclosure at banks – Risks are clear, but what are the opportunities?)

<sup>6</sup> KPMG (2022). Challenges with Data.

- **Commitment Tracking and Disclosure:** Firms may want to consider mechanisms for tracking performance against climate-related commitments and reporting and disclosure controls to ensure alignment with performance.

## Key Considerations and Challenges:

- **Controlled and Repeatable Processes:** Consider implementing controlled and repeatable reporting processes wherever practicable, e.g., through automation and technology, aligned with internal controls
- **Quantitative Modeling:** Consider what quantitative modeling capabilities you will need to implement scenario analysis. Where resources are in-house, engage them sooner rather than later. Use the development of quantitative models to be used for internal purposes to calibrate resources needs and challenges
- **Alignment of Disclosures:** Align financial and nonfinancial reporting disclosures; recognize the potential risks of incorrect or inconsistent disclosures and establish appropriate level of assurance
- **Proposed Regulation:** Become familiar with the scope of proposed climate-related regulatory changes, e.g., the SEC's proposed rule on climate-related disclosure

## 2.4 Factor Climate Impacts into Decision-Making .....

U.S. financial regulators have expressed concern regarding the potential disproportionate impact of banks' climate risk mitigation strategies on low- and moderate-income (LMI) households and other financially vulnerable communities. Proposed bank regulatory guidance has identified fair lending concerns as a potential risk related to climate risk mitigation. In order to anticipate evolving regulatory expectations, firms may want to consider the following points.

- **“Climate Vulnerability” Identification:** Consider what characteristics place low- and moderate-income (LMI) and other vulnerable communities at a higher risk of adverse impact from climate change
- **Bank-Specific “Climate-Vulnerable” Customers:** Consider ways to identify the company's highly climate-risk vulnerable population (e.g., individuals, businesses, and municipalities), and the associated qualitative and, as possible, quantitative impact
- **Potential Climate-Driven Events:** Identify potential abrupt repricing events and impaired values and/or stranded assets due to climate-related policy changes or consumer behavioral preferences
- **Potential Actions:** Consider what strategies and practical actions would be needed to address the climate-related risks based on the impact analysis performed

## Key Considerations and Challenges:

- **LMI Communities May Require Added Attention:** Low- and moderate-income and other vulnerable communities that may be at a higher risk of adverse impact from climate change can include:
  - Communities located in climate risk zones (e.g., flood zones, rural areas, urban heat islands);
  - Households that may not have access to credit to mitigate risk or repair losses from climate events; and
  - Households that are spending a higher-than-average portion of their income on energy costs.<sup>7</sup>
- **Integrating LMI Considerations in Metrics and Scenarios:** Consider the value of and capabilities to develop models and metrics that measure the disproportionate impacts on LMI (positive and negative). External data may need to be acquired. For example, a bank may consider outsourcing flood-related data (e.g., estimates of flooding probability and severity by location) to model disproportionate risks to borrowers residing in areas with different flood hazard profiles.
- **Conduct Gap Analysis of Processes:** Consider what changes in existing processes might be needed. For example:
  - Incorporating and evaluating climate-related risks into underwriting standards, loan terms and conditions, and asset management and servicing procedures for federal lending policies and programs; and
  - Working with state insurance regulators to examine the potential for “major disruptions” of private insurance coverage in regions particularly vulnerable to climate events

<sup>7</sup> KPMG (2021). Ten Key Regulatory Challenges of 2022.

## Contact us

### KPMG

#### Amy Matsuo

Principal and Leader, Regulatory and ESG Insights  
amatsuo@kpmg.com

#### Adam Levy

Principal, Climate Risk Leader  
adamlevy@kpmg.com

#### Walid Mnif

Director, Climate Risk Data and Analytics  
wmnif@kpmg.com

[visit.kpmg.us/IMPACT](https://visit.kpmg.us/IMPACT)

### RMA

#### Edward J. DeMarco, Jr.

Chief Administrative Officer and General Counsel  
edmarco@rmahq.org

#### Fran Garritt

Director, Securities Lending & Global Markets Risk  
fgarritt@rmahq.org

[rmahq.org/contact-us](https://rmahq.org/contact-us)



[kpmg.us](https://kpmg.us)

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Guided by RMA's mission of advancing sound risk management principles, RMA brings financial institutions high-quality, cost-effective model risk management services delivered by a team of industry practitioners with more than 25 advanced degrees.