



## ESG & Climate Risk

*An introduction for financial services institutions*

*Federal Home Loan Bank of NY – 2021 Member Education Series*

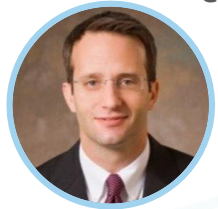
*May 27th, 2021 / Deloitte & Touche LLP*

# Meeting with you today



**Ricardo Martinez, Principal**

- US Sustainable Finance Risk Leader
- Specializes in non-financial risk management, served as the Lead Business Partner for the European Central Bank, where some of the original climate risk regulations and guidance originated
- Experience across several regulatory and compliance remediation initiatives



**Corey Goldblum, Principal**

- Leads Deloitte's Credit Risk Advisory practice in the US
- 21+ years of experience in financial modeling, credit analysis, valuation, ALLL/CECL, stress testing, DRR engagements
- Member of Deloitte's US Climate Risk leadership team (co-leads the Climate Risk Modeling area)



**Michael Monaco, Senior Manager**

- 9 years of experience with risk and modeling in the financial services industry
- Experience developing and validating models used for credit risk, market risk, liquidity risk, and operational risk
- Member of Deloitte's internal Climate Risk Modeling working group

# Discussion Agenda

-  Overview of ESG and Climate Concepts
-  Climate Considerations for FHLB Members
-  Regulatory & Industry Trends in Climate Risk
-  Climate Risk Management Implications
-  Initiating Change

# Environment, Social, and Governance (ESG) Themes

Below are typical themes we see financial institutions, their stakeholders and counterparts prioritize in their sustainability assessments; these can include self-assessments, but also assessments of others.

## Environment

### Environmental Footprint

- Climate change, GHG emissions, and global pollution
- Local pollution
- Impacts on landscapes, ecosystems and biodiversity
- Overuse and wasting of resources
- Waste issues
- Animal mistreatment

## Social

### Community Relations

- Human rights abuses and corporate complicity
- Impacts on communities
- Local participation issues
- Social discrimination

### Employee Relations

- Forced Labour
- Child labour
- Freedom of association and collective bargaining
- Discrimination in employment
- Occupational health and safety issues
- Poor employment

## Governance

### Corporate Governance

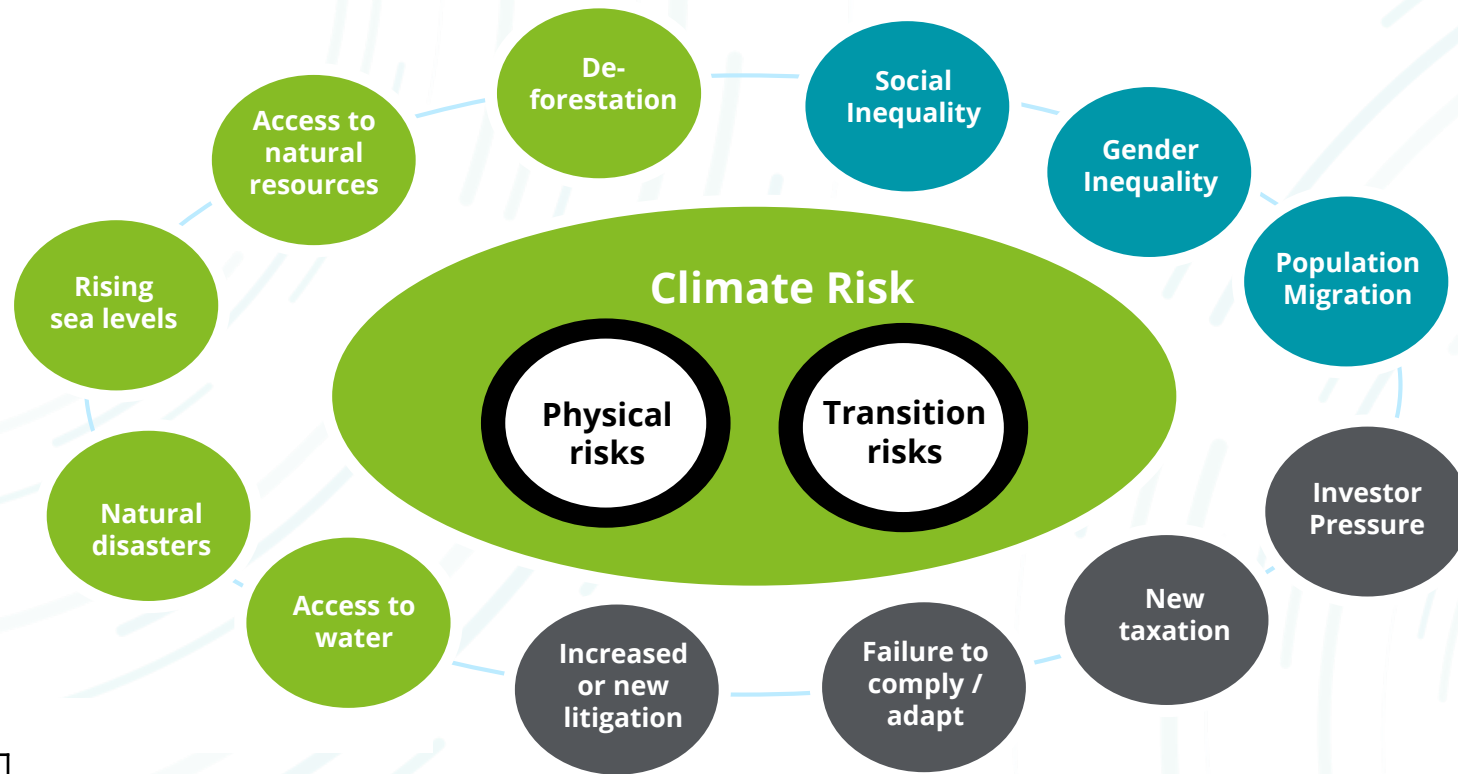
- Corruption, bribery, extortion, money laundering
- Executive compensation issues
- Misleading communication
- Fraud
- Tax evasion
- Tax Optimization
- Anti-competitive practices

## Cross-theme Issues

- Controversial products and services
- Products (health and environmental issues)
- Violation of national legislation
- Supply chain issues
- Violation of international standards

# Overview of Climate and other ESG-Risks

ESG themes in aggregate translate into a broad range of risks to financial institutions. These risks are often interdependent, latent, and difficult to quantify.



Key: ESG risks

<span style="color: green;">●</span>	Environment
<span style="color: teal;">●</span>	Social
<span style="color: darkgrey;">●</span>	Governance

*“Climate change is one of the greatest challenges faced by mankind this century, and there is now broad agreement that we should act. But that agreement needs to be translated more urgently into concrete measures.”*

**Christine Lagarde, President of the European Central Bank\***

*\*Source: Climate change and central banking (europa.eu)*

# Climate Risks and their Business Impacts

Physical and transition risks manifest as business risks via micro- and macro-economic transmission channels.

## Climate Risks

### Transition Risk

- Policy & regulation (e.g., carbon tax)
- Technological development (e.g., electric vehicles)
- Consumer preferences

### Physical Risk

- Chronic (e.g., temperature changes, sea level rise)
- Acute/catastrophic (e.g., heatwaves, floods)



## Transmission Channels

### Microeconomic

- Financial impact on individual households and businesses
- Business disruption
- Property damage & liabilities

### Macroeconomic

- Unemployment
- GDP changes
- Capital depreciation



## Business Risks

### Financial Risk

- Credit
- Market
- Liquidity

### Non-Financial Risk

- Operational
- Reputational
- Strategic
- Physical Security
- Model
- Compliance & Regulatory

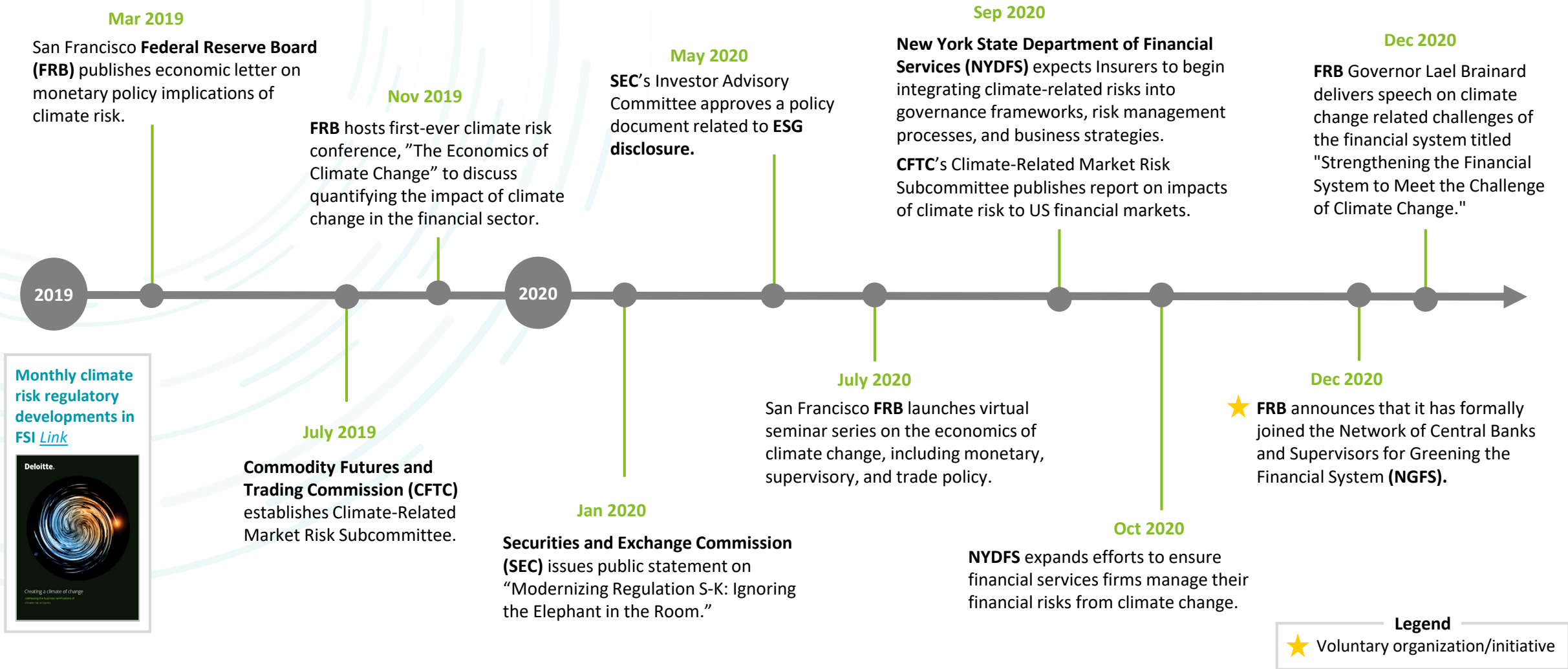
# Risk Considerations for FHLB Members

Both physical and transition risks can impact financial institutions, with physical risk posing a larger threat to mortgage markets, transition risks impacting wholesale exposures more heavily.

Considerations	Physical Risks	Transition Risks
Real Estate Exposure	<ul style="list-style-type: none"><li>▪ <b>Acute/catastrophic weather events</b> (e.g., hurricanes) may cause near term damage to loan collateral and/or disruption in the financial condition mortgages borrowers or insurance policy holders</li><li>▪ <b>Chronic physical risks</b> (e.g., sea level rise) may have protracted impacts on mortgage collateral values/default frequencies or insurance claims</li></ul>	<ul style="list-style-type: none"><li>▪ Changing consumer preferences &amp; new policy incentives may impact demand for <b>energy efficient homes and use of green lending programs</b></li><li>▪ Future policy changes (e.g., redefining FEMA flood maps) could impact both insurance markets and collateral values</li></ul>
Wholesale Exposure	<ul style="list-style-type: none"><li>▪ Financial institutions have indirect exposure via loan counterparties with portfolio concentrations in <b>sectors sensitive to physical risk such as retail credit, agriculture, and CRE.</b></li></ul>	<ul style="list-style-type: none"><li>▪ Financial institutions <b>face direct costs as they undergo transformational efforts</b> to respond to regulatory requirements, social and political factors, and reduce scope 1,2, and 3 emissions</li><li>▪ Financial institutions have indirect exposure via loan counterparties with portfolio concentrations in <b>sectors sensitive to transition risk such as energy and transportation.</b></li></ul>

# Regulatory & Industry Trends in Climate Risk (US 2019-2020)

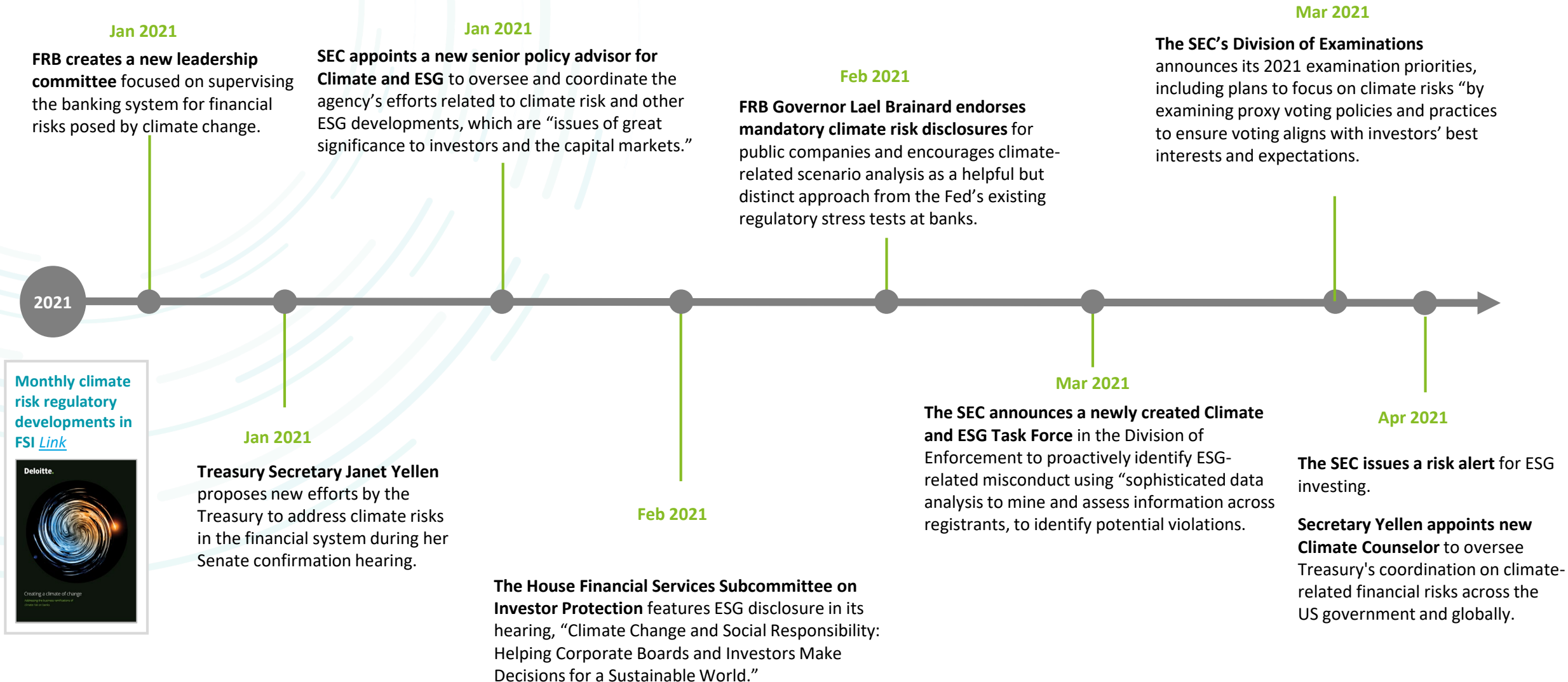
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# Regulatory & Industry Trends in Climate Risk (US 2021)

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# Regulatory & Industry Trends in Climate Risk

A global ecosystem of public and private initiatives will continue to shape the agenda and pace of change. Constant monitoring of progress and evolving practices is necessary.

## International Initiatives

Set standards for diverse set of climate topics including disclosures, regulation, and modeling methodologies



## Research Institutes

Provide valuable climate science research, generating data and developing scenarios in collaboration with regulators



## Regulatory Authorities

Network of global central banks and regional authorities establishing regulatory requirements for climate risk



## Rating Agencies

Rating agencies incorporate climate considerations into credit analysis



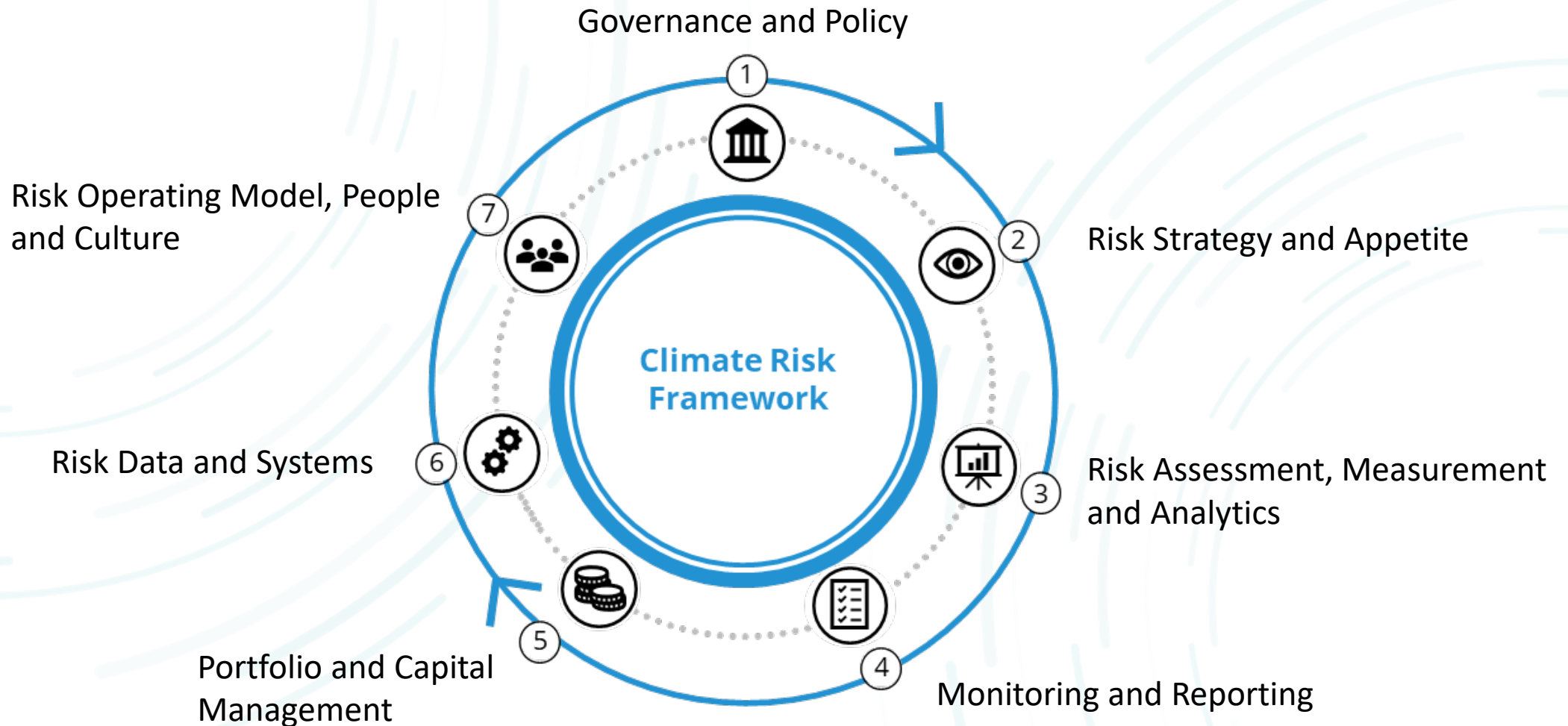
## Data Providers

Vendors providing data on physical and transition risks, as well as broader ESG metrics



# Climate Enterprise Risk Management (ERM) Components

Management of financial and nonfinancial risks derived from climate risks require careful updates to the ERM framework; leading firms have assessed key changes and requirements.



# Climate Risk Management Functional Roles & Responsibilities

Working across business units and functions is essential to firmly embed climate risk management into your business and ERM framework

## Strategy

- Shaping innovative and brand-enhancing sustainable finance strategies, which successfully capture (and even create) attractive market demand

## Sustainability function

- Designing sustainable finance programmes which add-value, deliver positive impact, and support delivery of strategic objectives

## Front office (Markets & products)

- Understanding customers ESG preferences, and incorporating into these into the sale of products, and provision of advice, in a rapidly-developing regulatory environment

## Communications

- Communicating credibly and effectively to the market the sustainability of firms operations and financing, it's ESG impacts, and the resilience of its strategy to climate change

## Procurement & HR

- Managing supply chain ESG risks, and ensuring firms do business with suppliers with consistent values and standards

## Risk

- Identifying, quantifying, managing and responding to latent and emerging ESG risks
- Integrating ESG (and particularly climate) capabilities into existing risk frameworks

## Finance

- Incorporating climate-related financial risks into pricing, forecasting and budgeting, financial reporting, and capital-allocation

## Legal

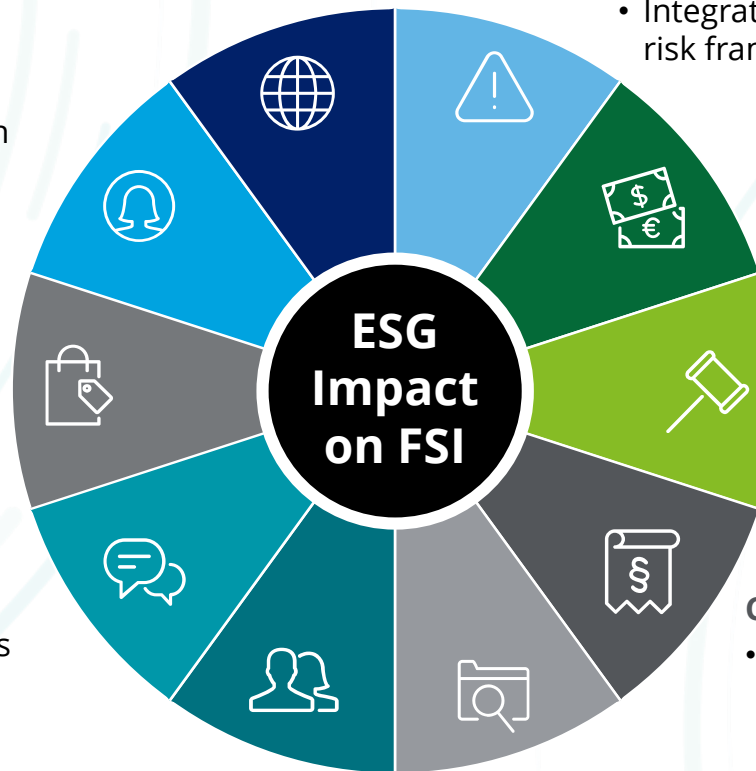
- Understanding and managing liability risks from climate change – from inadequate, or inaccurate disclosure of material financial risks

## Compliance

- Maintaining currency with the rapidly evolving, and complex, regulatory climate risk and sustainable finance landscape

## Internal audit

- Setting appropriate audit programmes to focus on material risks to firms climate risk identification and management



# Initiating Change

Organizations typically begin their journey with climate risk by developing a high-level understanding of key risks and aligning on strategic vision for the future.



## Establish enterprise ESG framework

- Develop governance framework for ESG and climate risk
- Establish strategic vision for climate risk, including sustainability metrics & targets



## Perform an initial climate risk exposure analysis

- Consider asset portfolio characteristics (e.g., geography, counterparty loan profiles)
- Obtain climate risk data relevant for asset portfolio (e.g., physical risks such as flooding)
- Overlay climate data onto loan portfolio characteristics to develop understanding of key risks



## Consider climate risk scenarios to understand impact on key portfolios

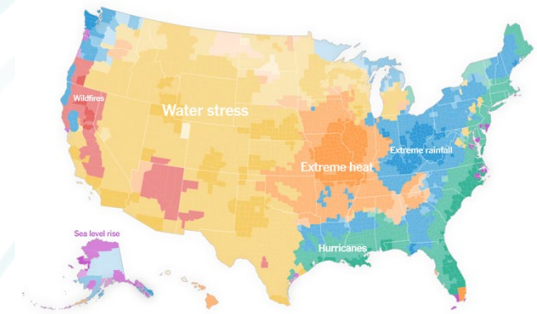
- Develop climate risk scenarios based on key risks identified in exposure analysis
- Calculate scenario impact for portfolio risk attributes (e.g., defaults, recoveries)
- Consider impact of climate scenarios on strategic objectives



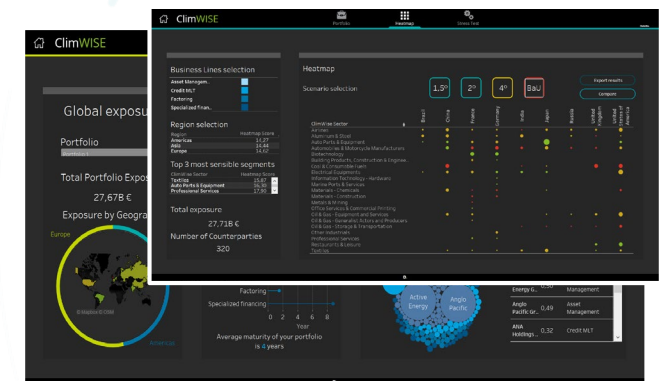
## Align risk analysis with enterprise activities

- Embed climate risk management practices into ERM framework
- Align risk analysis with strategic decisions and activities

**Illustrative Climate Risk Data Heatmap**



**Illustrative Scenario Analysis Tool**



Source: ClimWISE



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