



# PROPOSED GUIDANCE FOR NEW YORK STATE REGULATED BANKING AND MORTGAGE ORGANIZATIONS RELATING TO MANAGEMENT OF MATERIAL FINANCIAL RISKS FROM CLIMATE CHANGE

December 2022

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# I. Introduction

1. Climate change poses a wide range of potential and possibly significant risks to the safety and soundness of the financial system. Risks that directly affect financial institutions, particularly where those risks are new and evolving, inform the prudential objectives of the New York State Department of Financial Service (“DFS”) as it seeks to assess and promote the safety and soundness of its supervised institutions and to foster the resilience of the New York financial system. To thrive in the face of global competition, New York State-regulated banking and mortgage institutions need to understand and manage their operational resilience and safety and soundness while considering the financial risks they may face associated with climate change.
2. On October 29, 2020, DFS issued industry guidance highlighting the impact of risk drivers from climate change on its regulated institutions.<sup>1</sup> That letter set forth DFS’s expectation that regulated institutions start integrating financial risks from climate change into their governance frameworks, risk management processes, and business strategies, and start developing their approach to climate-related financial risk disclosure.
3. DFS is issuing this guidance (“Guidance”)<sup>2</sup> to support efforts by regulated institutions in assessing and managing their material climate-related financial risks. Illustrative examples, which should not be viewed as mandatory or exhaustive, are provided throughout the Guidance for explanation and clarification purposes.
4. This Guidance applies to New York State-regulated banking organizations, New York State-licensed branches and agencies of foreign banking organizations (“FBOs”), and New York State-regulated mortgage bankers and mortgage servicers (“Originators and Servicers,” and collectively, “Regulated Organizations”).
5. References to boards of directors of Regulated Organizations throughout this document include equivalent bodies that perform the same functions as boards of directors.
6. This Guidance is intended to address material financial risks related to climate change faced by Regulated Organizations in the context of risk assessment, risk management, and risk appetite setting. The quantification of climate-related financial risks is a developing area with data and measurement challenges. A Regulated Organization’s assessment of materiality may be based on the nature, scale, and complexity of its business, and FBOs may take into account home-country regulators’ requirements, as appropriate.
7. DFS’s interest in climate-related financial risk pertains specifically to the operational resilience and safety and soundness of its Regulated Organizations, and this Guidance advises Regulated Organizations on how they may incorporate these novel and evolving risks into their existing risk management frameworks, consistent with established risk appetites and business

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<sup>1</sup> New York State Department of Financial Services, [Industry Letter on Climate Change and Financial Risks](#), October 29, 2020.

<sup>2</sup> The objective of this supervisory guidance is consistent with interagency guidance implemented by federal banking regulators. See e.g., [Board of Governors of the Federal Reserve System, Role of Supervisory Guidance](#), 86 Fed. Reg. 18173 (April 8, 2021).

strategies. This Guidance is not intended to and does not instruct Regulated Organizations on the outcomes of their specific risk assessments, including how credit or investment decisions might evolve to account for climate-related financial risks.

8. Regulated Organizations should be mindful that changes to their risk management frameworks to account for climate-related financial risks must not unduly harm or disadvantage at-risk communities. In applying this Guidance, Regulated Organizations should continue to develop and effect reasonable risk-based business strategies and should seek to avoid unnecessary market disruptions. Further, they must in all instances adhere to applicable consumer protection laws, regulations, and guidance, including fair lending considerations.

9. Many aspects of changing climate conditions and the financial risks that may arise as a consequence are new or evolving, meaning that as with other types of dynamic and evolving risks, Regulated Organizations may need to incorporate climate-related financial risks into their risk frameworks based on partial or imperfect information. Nonetheless, DFS urges organizations not to let uncertainty and data gaps justify inaction. Rather, as Regulated Organizations build their capacity to assess and manage climate-related financial risks, they may wish to take an iterative approach that leverages further developments in methodologies and improved data availability.

10. As the effects of climate-related financial risk drivers extend beyond individual organizations to the broader financial system and the economy, DFS will continue to coordinate with its state, federal, and international counterparts on climate-related financial supervision.

## **II. Financial Risks from Climate Change**

11. Climate change risks can be broadly categorized into two primary channels—physical risks and transition risks—and Regulated Organizations should consider the effects of each of these types of risks on their operational resilience, their safety and soundness, and the particular consequences these risks may pose to their customers.

12. Physical risks arise from the increasing frequency, severity, and volatility of acute events, such as hurricanes, floods, and wildfires. They may also stem from chronic shifts in weather patterns, manifesting as sea level rise with adverse effects on real property and infrastructure including increased flooding and coastal erosion, droughts that can disrupt agriculture production, and intensifying heat waves responsible for increased mortality risk.<sup>3</sup> Climate change is associated with increased heat and precipitation extremes across the globe, along with the likelihood of multiple perils occurring at once (e.g., concurrent heat waves and droughts, or flooding caused by storm surge and extreme rainfall).

13. Significant changes in physical conditions have economic consequences that can directly affect financial institutions and may have negative implications for their resilience, safety and soundness if not properly mitigated and managed. For example:

- Climate-related natural disasters can cause business disruption, destruction of capital, increased costs to recover from disasters, stress on infrastructure, reduced revenue, and human migration, each of which may significantly affect a Regulated Organization's clients or even the institution itself.

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<sup>3</sup> Extreme Heat, [Ready.Gov](https://www.ready.gov), accessed on April 6, 2022.

- These conditions can lead to lower residential and commercial property values, lower household wealth, lower corporate profitability, and stress on social and economic systems, translating into financial and credit market losses that affect Regulated Organizations' balance sheets. Organizations may also face increased liquidity, legal, and operational risks associated with these conditions.
- While insurance is an important mitigant to climate-related financial risks, continued availability of the same level or type of coverage is not assured. Increased physical risks may lead insurers to increase premiums, or reduce or even withdraw coverage in high-risk markets, which may impact the economic and financial health of households, businesses, and governments in affected areas and may cause Regulated Organizations to absorb directly a greater portion of losses.

14. Depending on their geographic coverage and business arrangements, Originators and Servicers that do not own underlying loans as assets may be directly subject to physical risks associated with climate change as follows:

- Increased operating costs associated with response to and recovery from severe weather events, such as additional increased staffing costs.
- Requirements to repair damaged properties before they can be transferred to investors may decrease anticipated revenues.
- The time needed to return a property to a habitable condition prior to title transfer may result in delayed sales timing and an increase in anticipated carrying costs for the institution's portfolio.
- Mortgage delinquency rates, which tend to go up after natural disasters,<sup>4</sup> leading to the need for more servicing staff and higher costs. If a loan defaults, the servicing revenue stream associated with it also ceases.

15. Transition risks arise from economic and behavioral shifts driven by policy and regulations, adoption of new technologies, consumer and investor preferences, and changing liability risks. Because of the potentially widespread direct and indirect impacts associated with transition risks, the Financial Stability Oversight Council recognized that a disorderly climate-driven economic transition increases risk to financial stability.<sup>5</sup>

16. Transition risks can affect Regulated Organizations directly or indirectly. Direct impacts may include re-valuation of assets that turn out to be worth less than originally modeled due to changes affecting certain sectors or businesses. Costs to reinvest in and replace infrastructure affected by climate-related financial risks may also directly affect Regulated Organizations, as can financial, credit, and market consequences arising from transition risks that are reflected on a Regulated Organization's balance sheet, including its loans and investments. Indirect consequences of transition risks may arise, if, for example, the competitive landscape or revenue prospects for a company with significant operations in a discrete geographic area decline in response to climate-related financial risk, leading to loss of household income, population outflows, and attendant declines in property values, which could affect an organization's customer base and mortgage portfolio.

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<sup>4</sup> Gromowski, A., [The Impact of Natural Catastrophe on Mortgage Delinquency](#), CoreLogic, September 28, 2018.

<sup>5</sup> Financial Stability Oversight Council, [Report on Climate-Related Financial Risk 2021](#), October 21, 2021.

### III. Overarching Themes

17. There are several overarching themes of this Guidance that Regulated Organizations should keep in mind while assessing and managing climate-related financial risks.

#### A. Managing Climate-Related Financial Risks While Providing Fair Lending to All Communities

18. Although no one is spared from its impact, due to decades of systemic racism and redlining, many low- and moderate-income (“LMI”) communities and communities of color are harmed disproportionately by climate change and natural disasters.<sup>6</sup> For example, LMI communities and communities of color tend to be more susceptible to flooding and heat wave risks exacerbated by climate change.<sup>7</sup> In hard-hit communities, climate change is expected to undermine economic output, reduce already limited household income and wealth, and diminish access to capital. Compounding the problem, LMI communities also have fewer resources to recover from natural disasters. Financial institutions’ actions to address climate-related financial risks could have an unintended but disproportionate impact on financially vulnerable communities (e.g., exposing those communities to higher insurance or credit costs), exacerbating existing inequities.<sup>8</sup> Bearing in mind the particular challenges that LMI communities face in the midst of changing climate conditions, the Department expects Regulated Organizations to minimize and affirmatively mitigate adverse impacts on these communities while managing climate-related financial risks to address safety and soundness concerns.

19. Regulated Organizations are reminded that the practices outlined in this Guidance do not modify their obligations to comply with fair lending laws and other applicable consumer protection laws, regulations, and guidance. Regulated Organizations must manage climate-related financial risks prudently while continuing to ensure fair access to capital and credit. They should not base their risk management response to climate change on the concept or practice of disinvesting from low-income communities or communities of color or by making credit or banking more difficult or expensive for members of these communities to obtain. The federal and New York State Community Reinvestment Acts (“CRA”) encourage banking institutions to meet the credit needs of their communities, including LMI communities, emphasizing banking institutions’ continuing and affirmative obligation to help meet the credit needs of the local communities in which they operate.<sup>9</sup> Further details can be found in the DFS Industry Letter titled “[CRA Consideration for Activities that Contribute to Climate Mitigation and Adaptation](#).”

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<sup>6</sup> National Academies of Sciences, Engineering, and Medicine, [Framing the Challenge of Urban Flooding in the United States](#), The National Academies Press, 2019; Hoffman, J., et al., [The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas](#), *Climate*, January 13, 2020, 8(1), 12-26; Avtar, R., et al., [Understanding the Linkages between Climate Change and Inequality in the United States](#), Federal Reserve Bank of New York Staff Reports, no. 991, November 2021.

<sup>7</sup> Wilson, Bev, [Urban Heat Management and the Legacy of Redlining](#), *Journal of the American Planning Association* 86, no. 4, October 1, 2020, 443–57.

<sup>8</sup> Financial Stability Oversight Council, [Report on Climate-Related Financial Risk 2021](#), October 21, 2021.

<sup>9</sup> See New York State Banking Law Art.2, § 28b(4). Similar provisions apply to certain mortgage bankers per New York State Banking Law Art.2, § 28bb(4).

## **B. Proportionate Approach**

20. Climate change may affect different Regulated Organizations in different ways and to different degrees, depending on factors such as size, complexity, geographic distribution, business lines, and investment strategies, among others. Smaller organizations are not necessarily less exposed to climate-related financial risk, because they may have concentrated business lines or geographies that are highly exposed to climate-related financial risks without the risk-mitigating benefit of diversification available to larger organizations. Further, Regulated Organizations do not all have the same level of resources to manage these risks and may be at different points in the process of incorporating these risks into their governance, strategy, and risk management. Regulated Organizations should take a proportionate approach to the management of the climate-related financial risks they face, appropriate to each organization's exposure to climate-related financial risks.

21. A Regulated Organization that is part of a group of affiliated entities or a holding/parent company structure ("Group") may leverage the policies, procedures, and processes developed at the Group level for managing climate-related financial risks if: (1) the risks considered at the Group level include those facing the Regulated Organization; (2) the policies, procedures, and processes developed at the Group level are implemented at the level of the Regulated Organization; and (3) the Regulated Organization has appropriate access to relevant resources and expertise centralized at the Group level. If these conditions are met, references in this Guidance to a Regulated Organization's board may also refer to the board of the parent/holding company of the relevant Group.

22. For an FBO, if the risk management process and control functions are performed outside of the United States, the FBO's oversight function, policies and procedures, and information systems should be sufficiently transparent to allow U.S. supervisors to assess their adequacy for the branch or agency in relation to the FBO's climate-related financial risks. Further, it is critical that the FBO keep its head office apprised of the U.S. regulatory expectations pertinent to its U.S. operations, including guidance and direction on climate-related financial risks. Additionally, the FBO's U.S. senior management needs to demonstrate and maintain a thorough understanding of all relevant risks, including climate-related financial risks affecting the U.S. operations, and the associated management information systems used to monitor and manage these risks within the U.S. operations. U.S. management should inform the FBO's head office of these risks, to the extent they are material.

## **IV. Supervisory Guidance**

23. Regulated Organizations should take a strategic approach to managing material climate-related financial risks, considering both current and forward-looking risks and identifying actions required to manage those risks in a manner proportionate to the nature, scale, and complexity of their businesses, as follows:

### **A. Corporate Governance**

24. A Regulated Organization's board of directors and management are expected to care for the organization's operational resilience and safety and soundness on an ongoing basis and with respect to all material risks. Accordingly, DFS expects that a Regulated Organization's



governance framework will ensure that there is a process in place for identifying, measuring, monitoring, and controlling that organization's financial risks associated with climate change.

### **(i) Business Environment and Strategy**

25. Consistent with existing risk assessment and risk management strategies, Regulated Organizations should develop and implement sound processes for understanding and assessing the potential impact of climate-related financial risks on businesses and on the environments in which they operate in the short, medium, and long term, to inform the strategy communicated to, and operationalized by, each organization's business units and product lines.

26. In order to supplement existing risk management frameworks to accommodate climate-related financial risks, Regulated Organizations should consider questions such as: which business areas are or may in the future be exposed to these risks, what is the resiliency of their business models, what is the current or potential future materiality of the risks, and whether climate-related financial risks require consideration across all business areas and processes, or only those areas or processes that are or may be particularly exposed.

27. Any risk-mitigation strategies for climate-related financial risk should align with and support the Regulated Organization's broader strategy, risk appetite, and risk management framework. In addition, the board and management should ensure that any public statements about their climate-related strategies and commitments are consistent with their internal strategies and risk appetite statements.

### **(ii) Board and Management Oversight**

28. An effective risk governance framework is essential to a Regulated Organization's safe and sound operation. A Regulated Organization's board and management, including senior management, should have adequate understanding and knowledge to assess climate-related financial risks and their impact on the overall risk appetite of the organization. Sound governance may include designating a board member or one or more committees of the board (or an equivalent function) to be responsible for the oversight of assessment and management of climate-related financial risks with clear and specific allocation of roles and responsibilities, as well as allocating appropriate resources, and communicating to staff regarding the financial impact of climate-related risks. Responsibility and accountability may be integrated within existing organizational structures or by establishing new structures for climate-related financial risks. As climate change could impact multiple business units and require expertise from multiple functions, a cross-functional perspective may be needed to understand the changing risk landscape and identify potential ways to address climate-related financial risks.

29. The board should integrate climate-related financial risks into the organization's risk appetite framework. Material climate-related financial risks should be clearly defined with thresholds for materiality clarified. The risk management framework in place should ensure that when risk limits are breached, there is a defined process for escalating and addressing them.

30. The board should consider the relevant time horizons for materialization of climate-related financial risks. While some risks may materialize in the short or medium terms, others may stretch beyond the Regulated Organization's traditional capital or strategic planning horizons but within the maturities of longer-dated positions. Given the uncertainty around the timing of these risks, Regulated Organizations should take a dynamic approach to developing their risk management framework, tailored to their business models, specific activities, and specific

business decisions. In establishing time horizons for risk analysis and consistent with existing and evolving business strategies and risk appetites, Regulated Organizations should also consider the expected longevity of customer relationships, which may in some instances well exceed the tenor of any specific financial instruments or positions.

31. The board should continue to oversee the Regulated Organization's risk-taking activities. For example, the board should ensure that credit management, especially the loan committee or equivalent body responsible for overseeing and managing credit risk, is fully capable of and will be held accountable for implementing the organization's business strategies and adhering to the risk governance framework that integrates climate-related financial risks. Senior management should be responsible for executing the organization's overall strategic plan, managing material climate-related financial risks, and reporting to the board regularly on the level and nature of such risks. Such reporting should be timely and updated at regular intervals or when meaningful developments occur. Regulated Organizations should build capacity and ensure appropriate board and management education on climate-related topics.

### **(iii) Policies, Procedures, and Limits**

32. Management of material financial risks from climate change should be embedded in policies and procedures and controls across all relevant functions and business units of Regulated Organizations, in line with the strategy and risk appetite set by boards. Policies, procedures, and limits should be modified when necessary to reflect the distinctive nature of climate-related financial risks and changes, if any, to an organization's activities.

## **B. Internal Control Framework**

33. Regulated Organizations should incorporate climate-related financial risks into their internal control frameworks across the three lines of defense, to ensure sound, comprehensive, and effective identification, measurement, monitoring, and control of material climate-related financial risks. A Regulated Organization's organizational structure should establish clear lines of authority and responsibility for monitoring adherence to policies and procedures related to climate-related financial risks including the following:

34. The first line of defense—or the risk-taking function—should assess climate-related financial risks during client onboarding, credit application, and credit review processes. This requires sufficient awareness and understanding of how physical and transition risks impact clients, their business strategies, and their business environment. These assessment frameworks must also comply with applicable consumer protection laws, regulations, and guidance, including all fair lending considerations.

35. The second line of defense—or the risk management function—should undertake independent climate-related financial risk assessment and monitoring, including potentially challenging the assessment conducted by the first line of defense. The compliance function should ensure adherence to relevant climate-related rules and regulations and ensure that internal policies and procedures are compliant with climate-related standards, directives, charters, or codes of conduct to which the Regulated Organization is subject, as well as applicable consumer protection laws, regulations, and guidance, including fair lending considerations.



36. The third line of defense—or the internal audit function—should, consistent with their role in an organization’s risk-management framework generally, conduct regular independent reviews of an organization’s climate-related internal control framework and systems in light of changes in the methodology, business model, and risk profile of the organization, as well as in the quality of underlying data.

## **C. Risk Management Process**

37. Regulated Organizations should identify, measure, monitor, and control climate-related financial risks through their existing risk management framework, including existing risk categories, in line with their board-approved risk appetites, as follows:

### **(i) Identify Risk**

38. Regulated Organizations should consider how physical and transition risks may impact specific asset classes, sectors, counterparties, or geographical locations, in order to tailor existing risk frameworks to account for these considerations.

39. Identification of these risk drivers should occur at the transaction, portfolio, and entity or Group level(s), as appropriate. For larger organizations with more complex operations, the board and senior management also should identify how climate-related financial risks might influence interdependencies and correlations across portfolios and lines of business, which may amplify or mitigate risk exposures.

### **(ii) Measure Risk**

40. Regulated Organizations should develop appropriate key risk measurement tools or indicators for effective management of material climate-related financial risks as part of existing risk measurement systems. Climate scenario analysis may prove useful for measuring potential climate-related financial risks, as further detailed under Section E below.

### **(iii) Monitor Risk**

41. Regulated Organizations should regularly monitor risk positions and exceptions to operating within established policies, limits, and risk appetite related to material climate-related financial risks. Given the evolving nature of climate-related financial risks and the potential for additional risk transmission channels that might not yet be recognized, Regulated Organizations should monitor emerging risks and ensure that related risk data and metrics are updated regularly. Regulated Organizations should also monitor the impacts from climate-related financial risks on outsourcing arrangements, service providers, supply chains, and business continuity planning.

### **(iv) Control Risk**

42. The board and management of Regulated Organizations should establish and implement plans to mitigate and manage each organization’s exposures to material climate-related financial risks and should review and assess the effectiveness of mitigation plans regularly.

43. Multiple approaches to mitigation are available. As with other types of financial risk, mitigation measures pertaining to climate-related financial risk may include, but are not limited to, setting internal limits on existing risk areas to account for material risk, reflecting risk-related costs through risk-based pricing measures, and/or adjusting qualitative factors used to

determine Allowance for Credit Losses (“ACL”) to account for likely future credit losses associated with the organization’s existing portfolio that may differ from historical loss experience. Establishment and application of mitigation approaches may be an iterative process as data availability improves and more advanced measurement tools are developed. Regulated Organizations also may support their customers to enhance their resiliency efforts where customer appetite for assistance exists—this can also serve to mitigate risk for Regulated Organizations.

#### **(v) Climate Risks as Drivers of Existing Risk Categories**

44. Regulated Organizations should assess the impact of physical and transition risks as drivers of their existing risk categories, to the extent material and relevant, as follows:

##### **(a) Credit Risk**

45. Climate-related risk drivers may impact credit risk through changes in cash flows and/or asset values, which in turn change the probability of default and loss. This can occur, for example, through lower collateral valuation of real estate portfolios due to increased flood risk, loss of arable farmland due to prolonged drought, or reduced profitability due to business disruption from natural disasters. Credit risk could also increase if insurance is no longer available or affordable due to high physical risks in certain areas or for certain asset types, leading to decreased collateral values.

46. Regulated Organizations should familiarize themselves with how physical and transition risk drivers might have a material impact on their borrowers and counterparties and should consider climate-related financial risks that exist or may arise in their underwriting and ongoing portfolio monitoring practices. They should monitor climate-related credit risks, including credit risk concentrations stemming from physical and/or transition risks. As part of concentration risk analysis, Regulated Organizations should assess any changes in correlations across exposures or asset classes. While undertaking this analysis, Regulated Organizations are encouraged to continue extending credit in a manner consistent with their risk management frameworks, to avoid market disruptions, and to continue providing key products and services to New Yorkers, always taking into account applicable consumer protection laws, regulations, and guidance, including fair lending considerations.

##### **(b) Market Risk**

47. Climate-related financial risk may affect market risk when actual or anticipated severe physical events lead to shifts in market expectations, resulting in sudden repricing, higher volatility, or losses in asset values in certain markets. Likewise, climate-related risk drivers may lead to changes in borrowing costs or an abrupt repricing of financial assets. Regulated Organizations face market risk if the financial market has not priced in climate-related financial risks fully.

48. Regulated Organizations should consider the effect of climate-related risk drivers on their current and future investments, including whether and how these risks could lead to potential shifts in supply and demand for financial instruments (e.g., securities and derivatives), products, and services, with a consequent impact on their values or otherwise on the organizations’ safety and soundness.

### **(c) Operational Risk**

49. Climate-related risk drivers may give rise to operational risk through extreme weather events or changing chronic conditions, which may damage or affect the physical plant and/or critical functions of a Regulated Organization or may affect its employees, customers, or third-party service providers. Operational resilience is paramount to a Regulated Organization's safety and soundness, as well as to its ability to provide critical services to its customers, including New York consumers.

50. Given the centrality of operational resilience to overall institutional health and stability, Regulated Organizations should assess the impact of physical and transition risk drivers on their operations, control environment, and key customers and counterparty relationships. Assessment should be across all business lines and operations, including third-party operations as appropriate.

### **(d) Liquidity Risk**

51. Regulated Organizations should consider the impact of climate-related financial risk drivers on their ability to raise funds or liquidate assets and on their customers' demand for liquidity. They should assess whether material climate-related financial risks could cause net cash outflows or depletion of liquidity buffers, assuming both business-as-usual and stressed conditions (considering severe yet plausible scenarios) and whether climate-related liquidity risks could negatively affect their safety and soundness. The integration of climate-related financial risks into internal liquidity assessment may be iterative and progressive, as the methodologies and data used to analyze these risks mature and analytical gaps are addressed.

### **(e) Legal/Compliance Risk**

52. Regulated Organizations should consider how climate-related financial risk and risk mitigation measures affect the legal and regulatory landscape in which they operate. This consideration includes possible changes to legal requirements or underwriting standards. They should also consider applicable consumer protection laws, such as fair lending laws and regulations.

### **(f) Strategic Risk**

53. Strategic goals developed through a Regulated Organization's governance framework should consider climate-related financial risk drivers alongside other key risk drivers, including how they might affect achievement of those goals. For example, the potential physical risk impact of extreme or chronic weather events should be factored into assessing feasibility of goals and requirements for their implementation. Given the evolving nature of climate-related financial risks and the uncertainty as to timing and magnitude of their impact, an organization's periodic reexamination and update of institutional strategic goals should account for the dynamic nature of climate-related financial risks, as part of its regular slate of considerations.

## **D. Data Aggregation and Reporting**

54. Regulated Organizations should develop risk data aggregation capabilities and risk reporting practices that are capable of monitoring material climate-related financial risks and producing timely information to facilitate board and senior management decision-making. The

sophistication of such monitoring and management information systems should be consistent with the nature, scale, complexity, and diversity of the organization's operations and level of exposure to climate-related financial risks.

55. As the required data for assessment of climate-related financial risks may not yet be captured by existing information technology infrastructure of financial institutions, Regulated Organizations should consider enhancing existing systems, where appropriate, to make it possible to identify, collect, and centralize the data necessary to assess material climate-related financial risks so that it can be considered alongside other dynamic risks that organizations monitor and manage.

## **E. Scenario Analysis**

56. Similar to other forward-looking risk assessment frameworks that require an organization to evaluate its capacity to maintain a safe and sound, resilient operation while addressing the attendant challenges posed by a range of potential future conditions, climate scenario analysis can be a useful tool in identifying, anticipating, managing and measuring climate-related financial risks. The relevant objectives, assumptions, time horizons, and possible responses would typically be different from those applicable in traditional stress testing exercises, however, as climate scenario analyses may not be well suited to assess the potential impacts of transitory shocks to near-term economic and financial conditions or to factor into an organization's regulatory capital requirements.<sup>10</sup>

57. Regulated Organizations should consider using a range of climate scenarios based on assumptions regarding impact of climate-related financial risks over different time horizons to assess the resiliency of their business models and strategies, identify and measure vulnerability to relevant climate-related risk factors, including physical and transition risks, estimate exposures and potential impacts, and determine the materiality of climate-related financial risks. These assumptions can be quantitative and/or qualitative in nature and should rely on forward-looking information where available. The development and implementation of climate scenario analysis should be commensurate with a Regulated Organization's size, complexity, business activity, and risk profile. In the near term, a climate-related scenario analysis framework also can assist the institution in identifying data and methodological limitations and uncertainty in management of these risks and informing the adequacy of its risk management framework to address them.

## **V. DFS Feedback Request**

DFS is requesting feedback on all aspects of the Guidance, and in particular, regarding the following questions:

- 1 The Guidance does not establish a timeline for implementation. Should a timeline for implementation be established? If yes, what timeline and what is the reasoning supporting that timeline?
- 2 Recognizing that there is a wide range of complexity in climate scenario analysis, how can smaller institutions benefit from climate scenario analysis? What does appropriate

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<sup>10</sup> See, e.g., NGFS, [Guide to Climate Scenario Analysis for Central Banks and Supervisors](#), June 2020.

climate scenario analysis look like for them? Which kind of support do they need in establishing these scenarios?

- 3 The Guidance does not contain a provision regarding disclosure of material financial risks from climate change for Regulated Organizations. Should existing regulatory reporting requirements be supplemented to capture Regulated Organizations' exposure to material financial risks from climate change and their management of such risks, and if so, what should the supplemental report look like?
- 4 Are there other aspects of climate-related financial risks that the Guidance should consider? Or are there other aspects of the Guidance that would benefit from further clarification, context, or reframing?

Respondents are encouraged to provide specific examples and suggestions in response to these questions. DFS looks forward to reviewing and considering feedback on this proposed Guidance.