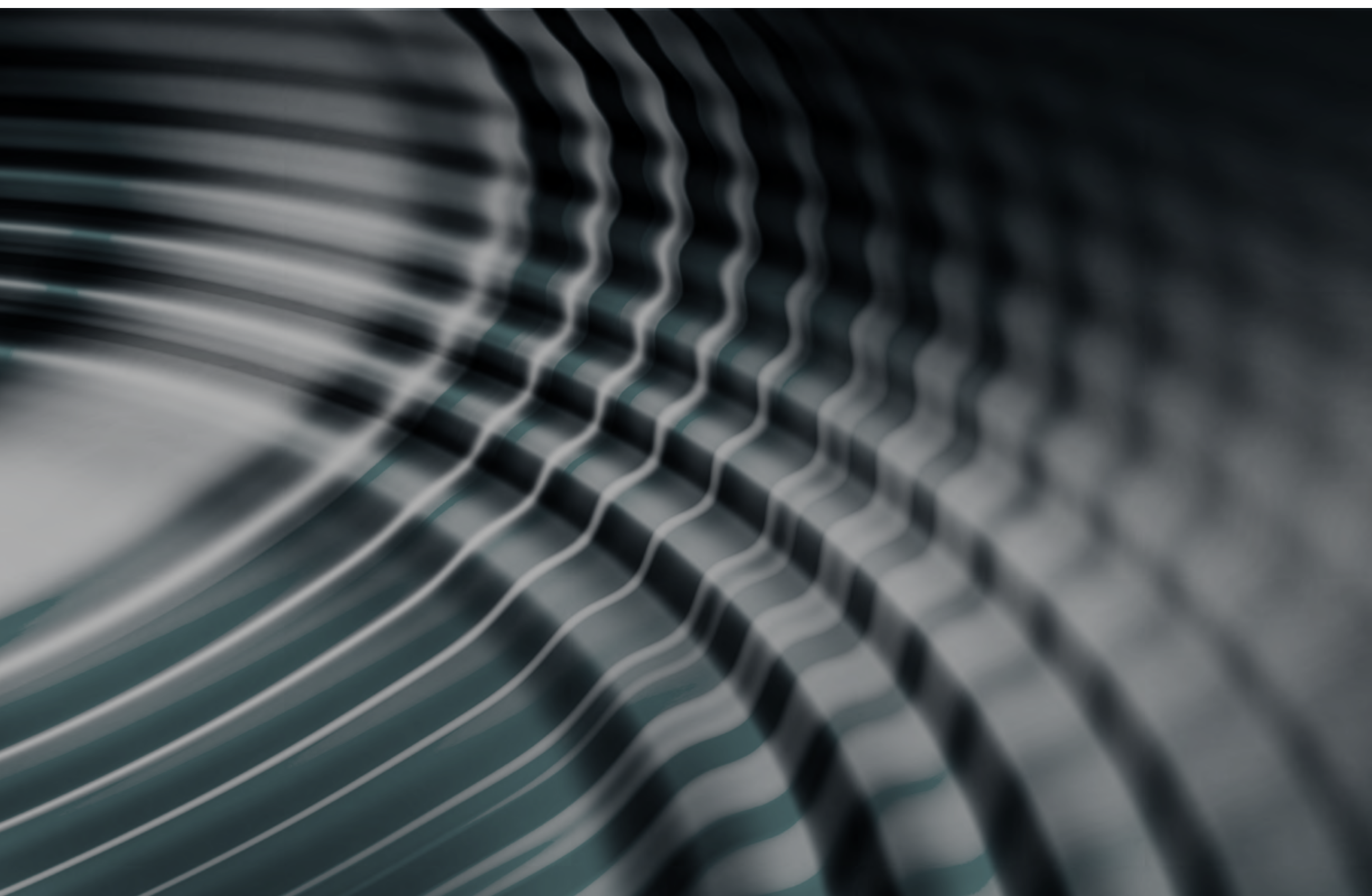
CAPCO

DON'T GET LEFT IN THE COLD:
CLIMATE REGULATION IS HERE



CLIMATE CHANGE IN FINANCE

Climate change has rapidly grown to become a crisis in the turbulent and unstable times we are confronted with. Increasingly severe weather has become more common within the past few years. 2020 has been one of the hottest years within the past decade. It has also had one of the most calamitous wildfire seasons ever recorded. As extreme/catastrophic weather intensifies, the global climate crisis risks now extend to financial institutions as many conduct business in risk-prone regions. These risks include but are not limited to physical and transitional risks (fig.1 for prudential risks resulting from physical and transitional factors). In 2017, the Network for Greening the Finance System (NGFS) was established with the overall aim of combating climate change from a financial perspective, providing recommendations to financial institutions on how to operate with a less carbon-intensive footprint. Since then, many central banks such as the ECB have joined the organization. Remarkably, the Federal Reserve Board joined the NGFS in December of 2020, highlighting the domestic concern and need for climate change action. Furthermore, the NYS Department of Financial Services (DFS) issued a letter to the executives of financial institutions expressing the need for banks to urgently consider climate change, potentially leading to increased regulation on financial institutions from a climate change standpoint. This presents the opportunity for US banks to incorporate NGFS recommendations through several actionable steps.

Figure 1 citing Prudential Risks

SEVERE WEATHER PATTERNS POSE FINANCIAL RISKS

Intense weather, such as hurricanes and storms, pose large physical risk to assets and properties that are directly affected by it. This leads to physical property damage, depreciation of asset value, unexpected high-capital rebuilding costs, supply chain disruption and business continuity challenges. Financial Institutions' mortgage portfolios comprising residential and commercial loans are among the greatest risk-prone areas as many of these assets sit on their balance sheets. Business revenue reduction coupled with unexpectedly high costs can pose a major risk for businesses and banks. There is a probability both will have to deal with the effects caused from the unforeseen weather. In addition, LMI (lower-to-moderate income) communities are likely to have trouble accessing immediate operating funds when a disaster occurs. For homeowners, this can cause unprecedently difficult times as their obligations remain. These ultimately can affect a borrower's (commercial and residential) ability to repay, leading to an increase in potential default rates. Banks are susceptible to these financial risks as they have many of these risk-prone assets and liabilities sitting on their balance sheets. Furthermore, local banks can be considered a greater risk, with many of their mortgages geographically concentrated in a certain region.

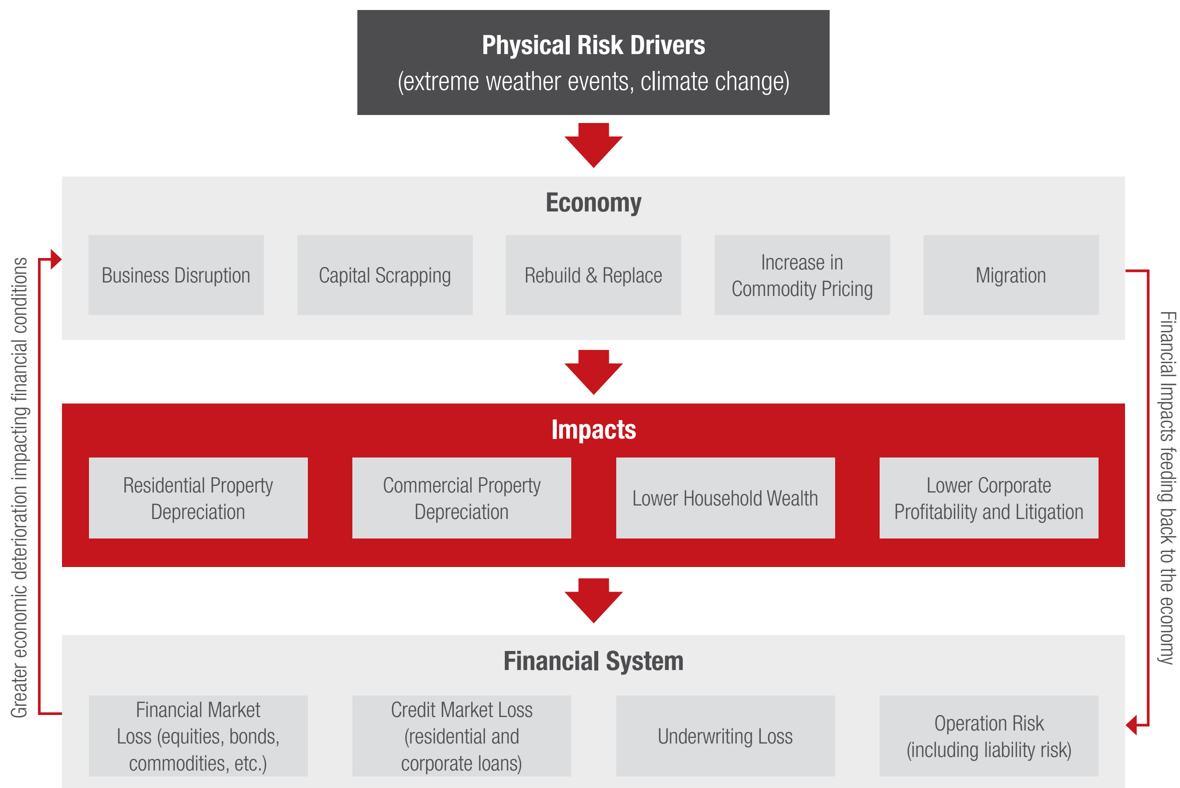


Figure 2 citing physical risk implications[1]

TRANSITIONING TO A GREENER FUTURE COMES WITH RISKS

Transition risk is also very evident as banks further operate sustainably concerning climate change. Shifts in asset value and higher operating costs are immediate challenges banks can face when investing in a lower-carbon future. Financing renewable energy initiatives can increase operational risk as banks incur high costs replacing dated infrastructure and technology. Technological advances aimed at combatting climate change may impact pricing for alternative products causing market risk (reduced market share and price volatility) ultimately impacting financial institutions. As new climate-related policies continue to surface, banks will feel these effects on their balance sheets. These policies will impact their valuations and credit rating assessments of clients operating with a high carbon footprint, creating risk for certain industries (e.g., mining). Furthermore, financial institutions exposed to carbon-intensive companies can face reputation risk and increased litigation for companies failing to conform. Ultimately, financial institutions will have to factor in climate change when assessing a borrower's creditworthiness, thus enhancing the risk frameworks of financial institutions.

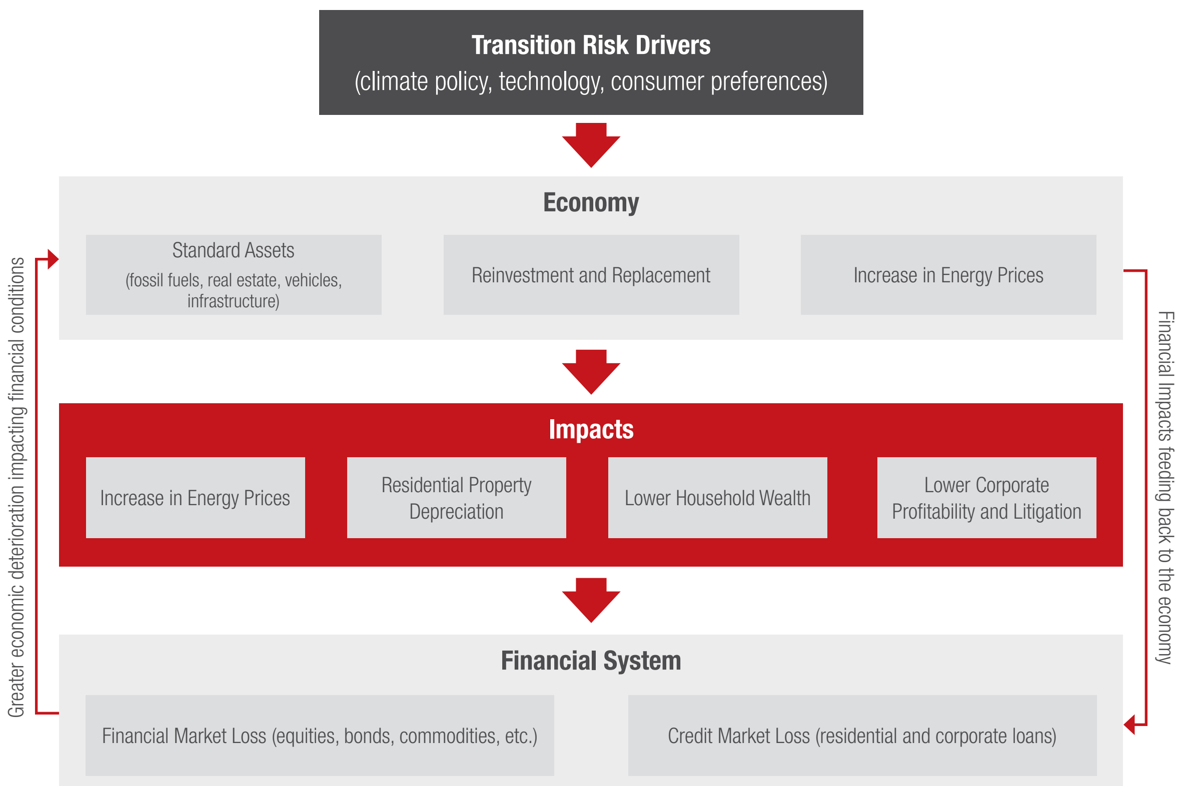


Figure 3 citing transition risk implications[2]

RECENT HISTORY PAVES WAY FOR MORE REGUALATION TO COME

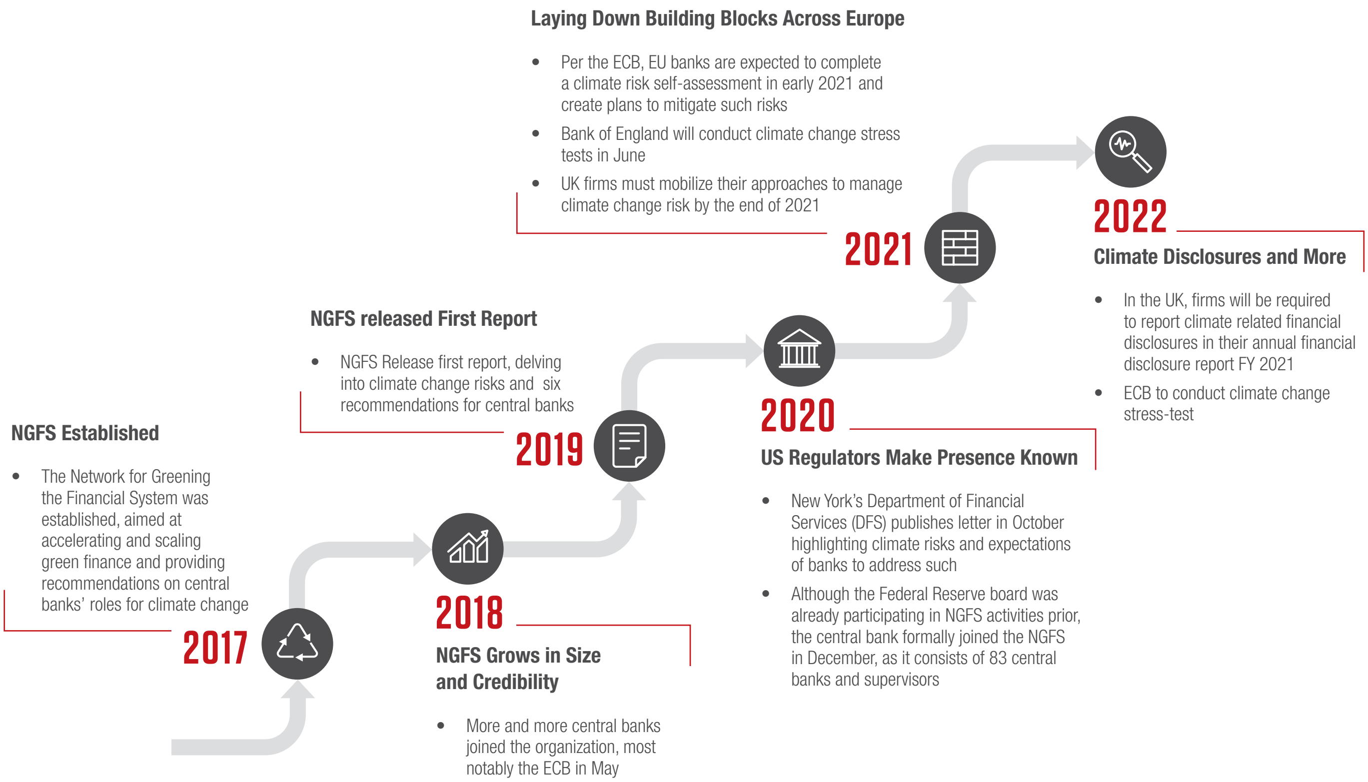


Figure 4 outlining the path of regulators as it reports to climate change risk

INTERNATIONAL REGULATORS SET THE STAGE

European institutions were the first to publish the risks of climate change in banking and associated regulations to mitigate these risks, with the UK leading the charge. In 2019, the Bank of England's Prudential Regulation Authority (PRA) communicated requirements to businesses as they are expected to fully integrate their approaches to manage climate change risk by the end of 2021[3]. The UK's Financial Conduct Authority (FCA) had a more targeted mandate, resulting in a new rule effective January 1, 2021 related to their annual financial disclosures. The first climate-related disclosures FY 2021 are set to release in March 2022. They must state whether their disclosures align with the Task Force on Climate-related Financial Disclosures' (TCFD) recommendations and explain if they have not done so[4]. The TCFD recommendations are summarized below:

- **Governance:** Publish governance addressing climate-related risks and opportunities
- **Strategy:** Publish realized and potential effects on climate risk and opportunities on the enterprise's strategy and financial planning
- **Risk Management:** Publish how the firm determines, analyzes, and manages climate risk
- **Metrics and Targets:** Publish relevant metrics and targets used to gauge and handle climate risks and opportunities[5]

Moreover, after being postponed due to the COVID-19 pandemic, the Bank of England has announced its climate stress test will be launched in June 2021, exploring three different scenarios by assessing different combinations of physical and transitional risks over the next 30 years[6].

The European Central Bank has also taken strides to mitigate climate change risk, as they recently published a guide in November 2020 where they outlined their supervisory expectations. One salient expectation is financial "institutions are expected to explicitly include climate-related and environmental risk in their risk appetite framework." That said, EU banks are tasked with completing a climate risk self-assessment in early 2021 and build action plans born out of said assessment. After which, the ECB will benchmark the banks' assessments and plans, culminating in a full supervisory review of the banks' practices and follow-up measures imposed, as needed. In addition, the ECB announced a climate change stress test to be conducted in 2022, with more details to come this year[7].

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WHAT OUR GLOBAL COUNTERPARTS ARE DOING

Albeit in a disjointed fashion, several financial institutions have already started assessing climate change risks by analyzing how natural disasters might affect their operations, researching ways to reduce their own carbon footprints and financing renewable energy initiatives[8]. Moreover, some European banks have taken on the daunting task of determining the extent to which assets on their balance sheets are contributing to climate change. This presents an extremely complex challenge as data provided by clients are not always complete and accurate. In addition, the issue of double-counting carbon emissions comes into play when different areas within the bank work with the same client. The work largely entails reviewing clients' physical assets, their outputs, and future production capacities. After which, banks can calculate the emissions clients produce concerning the amount of financing the bank has provided them[9]. As one might imagine, one of the biggest hurdles for banks to conduct a proper climate risk assessment is data availability; this, in turn, creates potential future liquidity risk. A comprehensive climate risk assessment is dependent on precise geolocation of a clients' assets and operations, local weather patterns, granular information on carbon footprint, and more. For this reason, two-thirds of financial institutions members of the Basel Committee on Banking Supervision's Task Force on Climate-Related Financial Risks (TFCR) answered they lack granular and reliable data needed to run climate risk-assessment models.[10] Accordingly, one of the workstreams of The Network of Central Banks and Supervisors for the Greening Financial System (NGFS) is focused on the following until April 2022:

- Identifying data elements necessary to analyze climate risks and accelerating green finance
- Discerning whether these data elements are available while documenting sources and limitations of obtaining data
- In conjunction with policy proposals, publishing a list of missing data elements to urge external stakeholders to bridge the gap to promote data access[11].

When looking at specific banks' success stories, one leader in the space is the Dutch bank, ING. It cut lending to the power industry by 22 percent year-over-year (YoY), while renewable energy financing increased by €1.9B in 2019. The bank has partnered with clients to guide their transition to low-carbon technologies. ING has developed a long-term plan to reduce the impact of their lending on emissions across nine high-emitting sectors, as the company recently released its first Climate Risk Report[12].

In the UK, banks' attention to climate change risk has gained momentum. Barclays announced a 'carbon limit' on the carbon emissions resulting from its financing, and this limit is scheduled to decrease each year. NatWest offers a new 'green mortgage' product, incentivizing borrowers with lower interest rates to buy an energy-efficient property. Moreover, over a million existing customers can finance green home improvements at competitive rates via their existing mortgage. Lloyds, the UK's largest mortgage lender, is actively financing renewable energy and is looking to grow its lending for electric vehicles. Lastly, although a smaller firm, Oxbury Bank, announced it would offer the first 'carbon offset savings' account where interest earned will be invested in tree-planting initiatives[13]. All this to say, with regulations being in a nascent stage, ESG initiatives can be used as a differentiation strategy now, but soon it will become required to compete.

THE US STARTS TO CATCH UP

As climate change has become a more widely acknowledged risk to the financial system, the Federal Reserve has made numerous statements and taken some key steps that imply climate change regulation may be on the horizon. In a November 2019 speech, Fed Governor Lael Brainard stated: “To fulfill our core responsibilities, it will be important for the Federal Reserve to study the implications of climate change for the economy and the financial system and to adapt our work accordingly.” In the same speech, Gov. Brainard reiterated that the Fed expects banks to have methods in place to identify, measure, control, and monitor all their material risks, including the impact severe weather events may have on their businesses[14]. A year later, in a December 2020 speech, Gov. Brainard continued to emphasize the risk climate change poses to the financial system and how the Fed is addressing it. She highlighted numerous committees and working groups that the Fed is actively participating in. These include Co-Chairing the Basel Committee on Banking Supervision’s TFCR (Task Force on Climate-related Financial Risks), hosting the Virtual Seminar on Climate Economics series, and sharing knowledge through the System Climate Network. Most notably, in late December 2020, the Federal Reserve Board became a full member of the NGFS. Additionally, in December 2020, for the first time, climate change was included in the Federal Reserve Financial Stability Report and the Fed released a CRA (Community Reinvestment Act) proposal highlighting the importance of investing in climate resilience[15]. Taken together, these actions leave no doubt that climate change is becoming a more important consideration for the Fed and banks should be prepared to react to future mandates.

Similarly, in October 2020, the NYS DFS sent a letter to CEOs of New York regulated financial institutions that emphasized the need for preemptive action on climate change risk. The letter clearly stated the expectation that regulated organizations “start integrating the financial risks from climate change into their governance frameworks, risk management processes, and business strategies.” Additionally, the DFS expects regulated financial organizations to “designate a board member, as well as a senior management function, as accountable for the organization’s assessment and management of the financial risks from climate change.” While the letter stops short of official regulation, it does indicate that the “DFS is developing a strategy for integrating climate-related risks into its supervisory mandate.”[16] New York regulated financial organizations should expect the DFS to continue to mirror the Fed in its push for more data and transparency regarding climate-related financial risks.

HOW TO GET AHEAD AND STAY AHEAD

The NGFS is one of the leading organizations addressing climate-related financial risks, with membership consisting of over 83 regulatory organizations worldwide; US members include both the Federal Reserve Board and the NYS DFS. When climate-related regulation comes to the US, there is a high likelihood it will be in line with NGFS recommendations.

The immediate next step US financial institutions can take right now is to start the conversation and accept future climate-related regulation as a forgone conclusion. The global discussions around climate-related financial risks will continue and regulation will follow. US financial institutions will need to account for their climate-related risks and explain how they are addressing them. The sooner they start, the sooner they can begin addressing climate-related financial risks throughout their organization. To understand their starting point, financial institutions should ask themselves the following questions from the 2020 NGFS Guide for Supervisors:

- What is your financial institution's overall opinion on the impact of climate change or environmental factors on the whole sector?
- What is your perception of potential threats/opportunities to your financial institution?
- Is your financial institution considering its response to key national or international policy initiatives in this area?[17]

The NGFS lays out five main areas where regulators need to clarify expectations: governance, strategy, risk management, scenario analysis and stress testing, and disclosure. This section will look at examples of how different regulatory bodies have addressed these areas and how US banks should react.

Governance

- Establishing strong governance structure from the top down
- Assigning responsibility for management of climate related financial risks to a board member and senior level management function

Strategy

- Factoring in climate change related risks in all aspects of overall business planning
- Determining the KPIs to evaluate how the business is progressing towards reduced carbon goals.

Risk Management

- Partnering with clients to begin developing the required data to perform comprehensive risk assessments on climate-related risks
- Improving the quality of data required for establishing metrics and to conduct risk assessments is crucial

Scenario Analysis and Stress Testing

- Evaluating organizational resiliency through scenario analysis and stress testing
- Conducting narrative style analysis to think through the various channels in which climate-related financial risks could manifest

Disclosure

- Preparing to explain to regulators and the public how your organization is addressing climate related financial risks
- Establishing a communication framework to ensure timeliness and accuracy in providing disclosures at a set cadence

1. **Governance:** To effectively address climate change's financial risks, organizations will need to develop a strong governance structure from the top down. As the NGFS states, "board-level commitment is vital to gain assurance that the work on climate-related and environmental risks has sufficient standing in the organization and allow the board to respond to the risks strategically." The Bank of England's PRA has released a Supervisory Statement, which includes explicit provisions relating to governance structures around climate-related financial risks. They state: "The PRA expects financial institutions to have clear roles and responsibilities for the board and its relevant sub-committees in managing the financial risks from climate change." This is not merely a recommendation, as they continue, "The PRA expects to see evidence that the board and its relevant sub-committees exercise effective oversight of risk management and controls.[18]

   Next Steps for US Banks to Establish Governance Structure: Assign responsibility for managing climate-related financial risks to a board member and senior-level management function. Board-level engagement on this issue will have a multitude of positive effects for the whole organization. Primarily, it will ensure climate-related financial risks are allocated sufficient resources. Secondly, it will signal to both the public and the organization that climate-related financial risks are being considered at the highest level of the business.

2. **Strategy:** Climate-related financial risks will undoubtedly profoundly affect financial institutions' business models in the coming years. These risks need to start being incorporated in all aspects of overall business planning and individual business lines. The German regulator, BaFin, released a Guidance Notice on Dealing with Sustainability Risks where they state, "business strategies of supervised companies should be fully reviewed for sustainability risks."[19]

   Next Steps for US Banks to Analyze Business Strategy: Climate change will impact both the financial industry and the larger economic environment in which it operates. Understanding how climate-related financial risks can impact your business model is imperative. Financial institutions should consider what key performance indicators they can use to evaluate how their business progresses towards their reduced carbon goals. Gathering adequate data to quantify climate-related financial risks will be a large challenge across the industry. Financial institutions will need to work diligently with their clients to collect this data and should consider how partnering with their peers could create synergies in this process.

3. **Risk Management:** Climate-related financial risks can be interpreted through existing prudential risk categories, such as credit, market, liquidity, and operational risks (see fig. 1). However, quantifying climate-related risks requires data that may not currently be available. To address this, financial institutions should work with their clients to begin developing the required data to perform comprehensive risk assessments on climate-related risks. In their Green Credit Guidelines, the China Banking Regulatory Commission lays out their expectations: "banking institutions shall develop client environmental and social risk assessment criteria, dynamically assess and classify client environmental and social risks, and consider the results as an important basis for credit rating, access, management, and exit."[20]

   Next Steps for US Banks to Enhance Risk Management: Financial institutions should consider climate-related financial risks through the lens of existing risk metrics. They will need to determine the best way to develop enhanced risk metrics and develop a comprehensive guide for managing their climate-related financial risks. Furthermore, organizations will need to explain how climate-related risks fit into the businesses' overall risk management structure. Like the point above, data availability will also prove to be a challenge in establishing enhanced risk management metrics and financial institutions will need to develop a plan to overcome this.

4. **Scenario Analysis and Stress Testing:** Due to the unpredictable nature and longer time horizon of climate-related financial risks, scenario analysis and stress testing will become increasingly important regulatory bodies tools. The NGFS identifies two key insights financial institutions can take away from these exercises. One, these methods can illustrate how resilient an institution's business model is across a variety of plausible scenarios. Secondly, these methods can help in the "quantification of the risks to assess capital adequacy." Both the UK's PRA and Germany's BaFin have set expectations regarding scenario analysis and stress testing. In the PRA's Supervisory Statement, they explain, "The PRA expects a financial institution's scenario analysis to address a range of outcomes relating to different transition paths to a low-carbon economy." They explicitly state that this analysis should contain both a short-term assessment and a long-term assessment. BaFin released a Guidance Notice on Dealing with Sustainability Risks where they lay out their stress testing expectations stating, "stress tests may include specific sensitivity and scenario analyses to examine the entity's ability to withstand adverse events or scenarios caused by physical and transition risks."[21]

   Next Steps for US Banks to Perform Scenario Analysis and Stress Testing: Climate-related financial risks are inherently unpredictable. Considering this, scenario analysis and stress testing will be critical tools that financial institutions can use to evaluate how resilient their organization is to various plausible scenarios. These processes should incorporate both short-term and long-term time horizons. Once again, data availability will be a challenge for scenario analysis and stress testing. The NGFS recommends that organizations start with a "narrative style" analysis to think through the various channels in which climate-related financial risks could manifest.

5. **Disclosure:** Increased public disclosures of financial risks related to climate change will be a central tool used by regulators in the coming years. The NGFS describes the importance of this: "disclosures contribute to market efficiency by ensuring that market participants have adequate insight into the risk exposures, risk assessment processes and capital adequacy of financial institutions."[22] We can once again look at the Bank of England's PRA as an example. In the previous section, we discussed the PRA's expectation that financial institution's disclosures related to climate-related risks conform to TCFD recommendations.

   Next Steps for US Banks to Prepare Disclosures: Financial institutions must be prepared to explain to regulators and the public how your organization is addressing climate-related financial risks. They will need to provide increasingly detailed information around their governance structures, risk management, and the metrics they are using to measure progress. Climate-related disclosures will likely be among the first items requested by regulators.

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