

SETTING OUT THE CONNECTION BETWEEN CLIMATE CHANGE AND STABILITY OF THE FINANCIAL SYSTEM: THE FSOC REPORT

Climate change is an “emerging and increasing threat to America’s financial system that requires action.” These were the words of [Treasury Secretary Janet Yellen](#) that accompanied the release by the Financial Stability Oversight Council (“FSOC”) of its Report on Climate-Related Financial Risk (the “FSOC Report”) (available [here](#)). The FSOC Report and its recommendations to FSOC members¹ are intended as a first step to make the US financial system more resilient to the threat of climate change, and are part of the Biden Administration’s whole-of-government response to the climate crisis. Ultimately the intention is to “help the US financial system support an orderly, economy-wide transition to the goal of net zero emissions.”

In the annals of the efforts to fight the climate crisis, October 21, 2021 may be seen as a watershed moment. In response to President Biden’s call for a whole of government response to climate change, a series of reports were published. The FSOC Report, which represents the first time US financial regulators have formally identified climate change as an emerging threat to financial stability, was released concurrently with reports issued by the Defense Department, the Department of Homeland Security, the Office of the Director of National Intelligence and the National Security Council.

One of FSOC’s principal mandates is to respond to emerging threats to the stability of the US financial system, and in particular to identify and address vulnerabilities of the system so that abrupt and unpredictable shocks to economic or financial conditions do not impair the ability of the system to provide liquidity, make credit available and clear payments. The FSOC Report recognizes that, although significant progress has been made in identifying and responding to climate-related risks, there is substantial work yet to be done. The FSOC recommendations are intended to represent the FSOC’s plan of action that its members can implement in accordance with their respective “mandates and authorities.”

Summary of the Recommendations

In particular, FSOC recommends that its members:

¹ FSOC is composed of ten voting members who head the U.S. Department of the Treasury, the Board of Governors of the Federal Reserve System, the Office of the Comptroller of the Currency, the Consumer Financial Protection Bureau, the Securities and Exchange Commission, the Federal Deposit Insurance Corporation, the Commodity Futures Trading Commission, the Federal Housing Finance Agency and the National Credit Union Administration, along with the independent member with insurance expertise, plus five nonvoting members. Two of the nonvoting members head the Office of Financial Research and the Federal Insurance Office. The other three nonvoting members are a state insurance commissioner, a state banking supervisor and a state securities commissioner designated by their peers

- Prioritize internal investments to expand their capacities to define, identify, measure, monitor, assess and report on climate-related financial risks and their effects on financial stability.
- Identify and take steps to ensure that they have consistent and reliable data to assist in assessing climate-related risks, and develop consistent standards, definitions and relevant metrics.
- Consider updating their existing public disclosure requirements to promote the consistency, comparability and decision-usefulness of information on climate-related risks and opportunities. In particular, members should consider whether public disclosures should include disclosure of greenhouse gas (“GHG”) emissions, as appropriate and practical, to help determine exposure to material climate-related financial risks. Efforts to enhance disclosure should build on the four core elements of the Task Force on Climate-Related Financial Disclosure (governance, strategy, risk management, and metrics and targets) to the extent consistent with the US regulatory framework and the needs of US regulators and market participants. In light of the widespread adoption of TCFD, FSOC believes this recommendation could also help promote international consistency and comparability.
- Use scenario analysis as a tool for assessing climate-related financial risks across a broad range of institutions, and build on the existing work of the Network of Central Banks and Supervisors for Greening the Financial System (“NGFS”) and the Financial Stability Board (“FSB”), as appropriate for the institutions and markets under consideration.
- Review existing regulations, guidance and regulatory reporting relevant to climate-related risks, including credit risks, market risks, counterparty risks and other operational and financial risks to assess whether updates are needed to address climate-related financial risks or to clarify expectations for regulated or supervised institutions regarding management of climate risks.

It is noteworthy that FSOC places great emphasis on global coordination. For example, FSOC recommends that members work with their international regulatory counterparts, bilaterally and through international bodies, as they (i) identify and fill gaps in data, and develop definitions, standards and metrics and (ii) assess requirements for climate-related disclosures. The FSOC Report makes specific reference to the work of the International Financial Reporting Standards (IFRS) Foundation Trustees in respect of developing an international sustainability standards board. It also refers to the work of the FSB, the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, the International Association of Insurance Supervisors, the Sustainable Insurance Forum, the International Monetary Fund and the NGFS.

Understanding Physical Risk and Transition Risk

The FSOC Report, consistent with any number of other analyses of risks posed by climate change, focuses on physical risk and transition risk.

- Physical risk refers to harm to communities and property arising from climate-related disasters (acute events, such as hurricanes, floods and wildfires, as well as heatwaves) and longer-term developments such as higher temperatures, changes in precipitation patterns, ocean acidification and sea-level rise. These can also have ecosystem impacts (such as soil degradation, surface water system changes and marine system changes), ecosystem changes (such as deforestation, desertification, migration and biodiversity changes) and water scarcity.
- Transition risk refers to risks arising from shifts in policy (largely aimed at reducing GHG emissions, such as clean energy transition, pollution controls and emissions taxes), regulation, consumer and business preferences and behavior, and investor sentiment, as well as the adaptation of technology (such as clean energy, clean transportation, and emissions removal or capture) to reduce the level of GHG emissions and mitigate the effects of climate change.

These risks have the potential to affect individual households, communities, businesses and governments, and FSOC directly ties potential damage to property, shifts in business activity, impacts on income and sharp changes in asset and liability values to stability of the financial system. Transition risk, particularly if delayed or uneven in application, may result in more abrupt economic shifts. At the same time, more frequent and severe weather events and climate-related natural catastrophes will likely be accompanied by higher levels of chronic physical risk, for example, in the form of sea-level rise.

The FSOC Report notes that potential consequences of the combination of physical risk and transition risk can include:

- credit and market risks associated with loss of income, defaults and changes in the value of assets;
- liquidity risks associated with shifting demand for liquidity;
- operational risks associated with disruptions to infrastructure; and
- legal risks.

Physical risk can impact the households, communities and businesses directly affected, as well as the financial institutions and investors associated with those directly affected. For example, property and casualty insurers/reinsurers are exposed to climate-induced losses and would be expected to increase premiums or withdraw from at-risk covers, which in turn would affect insureds and cedants. Damage to property could lower the value of collateral and associated income streams, exposing banks, insurers, pension plans and others to credit and market risks. Sources of liquidity may withdraw liquidity, exacerbating the initial impact of climate-related events and imposing further strain on the financial system and affected economies.

As the transition to a low-GHG emissions economy accelerates, businesses and communities impacted by transition-related developments may have greater difficulties meeting their financial obligations. There will be winners and losers, resulting in shifts in economic and financial risks. Economic effects could flow through the financial system

with the potential to weaken the resilience of financial institutions. The risks to the financial system would be amplified if the transition to a low-GHG emissions economy is disorderly, which could be the result of delays in mitigation, unpredictable changes in policy or divergence among national approaches, among other factors. If the transition is disorderly, the impact on firms, market participants, individuals and communities is likely to be more sudden and disruptive.

Addressing Data and Methodology Gaps

The ultimate concern is that these risks lead financial institutions to withdraw liquidity and reduce other financial services, thereby exacerbating the initial climate-related shocks. The key to understanding the foregoing risks is data – investors, markets and regulators need better data to assess and quantify the climate-related impacts of both physical risk and transition risk on all stakeholders, in order to understand, model and address the associated financial risks.

- Assessing transition risk for nonfinancial firms requires measurement of GHG footprints (assumed to be based on the Greenhouse Gas Protocol, and its three-part segmentation – Scope 1 (direct), Scope 2 (indirect from production of acquired electricity, steam, heat and cooling) and Scope 3 (all other indirect emissions in the value chain)). The predicate for effective reporting is a GHG inventory based on an analysis of potential sources of GHG emissions throughout an organization and its value chain. Measuring Scope 3 emissions can be challenging, as they include all indirect emissions associated with a company’s value chain. The Greenhouse Gas Protocol categorizes Scope 3 emissions first into upstream and downstream activities. Upstream activities transform an item from raw materials into the product produced by the organization, and incorporate the transportation associated with those supply chains. Downstream activities occur after a finished product is produced, from logistics to end of life disposal. Each of 15 categories can have its own measurement and quantification practices; some may be measured directly while others may require estimation or modelling.
- Financial firms need the means to assess the level of exposure to physical risk (*e.g.*, exposure of banks to loans secured by real estate, exposure of insurance companies on both the asset and liability sides, and exposure of funds and asset managers). Quantifying transition risk requires an understanding of the portfolio exposures to businesses and sectors more likely to be affected by the transition to a low-GHG emissions economy. These might be based on either a static balance sheet or a dynamic (future exposures) balance sheet.

FSOC recognizes that enhancing data resources and analytical tools will be critical. An integral part of this exercise is for the market and regulators to obtain data through climate-related disclosures by issuers of securities and regulated financial institutions. FSOC, as have countless others, recognizes that neither existing disclosure requirements nor voluntary disclosure frameworks have produced comparable, consistent and decision-useful climate-related disclosures across public companies and financial institutions.

This then serves as the predicate for FSOC’s recommendations on enhanced corporate and financial institution disclosure.

FSOC also recognizes that assessing the risks is complex and integrating climate-related risks into financial assessments is a new area of focus for regulators. The tools are works-in-progress. Moreover, the spillover effect across the financial system is complicated and new approaches are needed to measure, manage and mitigate climate-related financial risk.

The starting point is that measuring exposures against historical risks is insufficient since climate change by definition implicates changes in the nature, frequency and severity of climate-related financial risks. The emerging tool appears to be scenario analysis, which considers a range of possible future climate outcomes and associated economic and financial developments. It is forward-looking, and is similar to, but distinct from, stress testing employed by financial regulators. Stress testing often is linked to regulatory requirements and supervisory expectations, and has shorter time horizons, while scenario analysis is exploratory and is not tied to regulatory requirements. Scenario analysis of climate-related financial risks contemplates longer time horizons to assess medium- and longer-term business model resilience to climate-related risks that crystallize over time.

FSOC acknowledges that, in addition to being a relatively new tool for financial regulators, scenario analysis is complex and may not be appropriate for “frequent application on a broad or systemwide basis.” Other tools should be developed, such as climate value-at-risk (VaR) measurements – applying the traditional VaR framework to assess the impacts of climate change on financial institution balance sheets, and systemic risk indicators combining financial market and institution data.

In any event, data, tools and expertise across financial regulators will be needed both to assess physical risk as well as transition risk to individual institutions and across markets. And the first consideration in any scenario analysis of transition risk will be the scale of climate transition. FSOC recognizes that the necessary transitions are significant: global policymakers have communicated their intent to pursue policies to limit the rise in average global temperatures to 1.5°C above pre-industrial levels and the Biden Administration has committed the United States to reducing its GHG emissions by 50-52% by 2035 and achieving net-zero emissions by 2050. FSOC also recognizes that a related challenge is to incorporate disorderly transition scenarios into the analysis.

FSOC acknowledges the benefit in assessing financial institution and investor exposure to transition risk of focusing on the three sectors that account for close to 80% of GHG emission in the United States and are likely to undergo the most significant transition – electricity, manufacturing/industrial, and transportation. There is an additional challenge in that these directly affected sectors are only a portion of the potential exposures to transition risk, as many other sectors use the output of these sectors and therefore could have exposure if changes in policy, preferences and other factors were to increase the costs of GHG-intensive goods and services.

Transition risk also leads to a set of market risks, particularly in the case of a disorderly transition, where market volatility would likely follow from price volatility driven by regulatory changes and geopolitical events.

Concluding Thoughts

The Biden Administration’s whole-of-government focus on climate change, starting with acknowledgements of the threats posed by climate change, is a welcome development. It is a call to action: the FSOC Report states that its members recognize that “the need for better data and tools cannot justify inaction, as climate-related financial risks will become more acute if not addressed promptly.” It also acknowledges that while FSOC members are taking action, a key driver of climate change is the failure to “account for the externalities associated with GHG emissions,” and that Administration policy and Congressional action also play a role in addressing these externalities and reducing GHG emissions to meet emission reduction targets. Failure of US and global policymakers increases the risks of climate-related impact on the financial system and heightens the risk of a disorderly transition.

The impact of climate change is global; US financial regulators are playing catch-up relative to their peers in the European Union (which has undertaken a comprehensive set of initiatives as part of the European Green Deal, including in the area of sustainable finance) and the United Kingdom (which, for example, released last week its roadmap for sustainable investing), but their experiences are noteworthy. FSOC notes that progress on assessing the financial stability implications of climate-related financial risks, challenging as it may be, has been made especially overseas, and further notes, for example, that the experiences of overseas regulators suggest that scenario analysis to measure risk across a broad spectrum of financial institutions may be “the best approach currently available.”

The FSOC Report provides a useful roadmap for FSOC members, and it also provides a useful overview, for all stakeholders, of the complex and far-reaching inter-relationships between the effects of climate change and potential impacts on financial stability. It is, however, according to [Secretary Yellen](#) neither exhaustive nor “the final word from [FSOC] on this urgent priority. Instead, it is just a first step.” While as noted above, US regulators are aware of the negative consequences of inaction, the FSOC Report does not impose timelines for action. We anxiously await the next steps, including rulemaking proposals from the SEC on climate-related disclosures.

Mark S. Bergman
Washington, D.C.
October 22, 2021