



How Do Bank Regulators Treat Climate Change Risks?

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Introduction

Potential risks to the financial system from climate change have attracted growing attention in government, academia, and media, raising questions about [the roles of central banks](#) and [bank regulators in addressing such risks](#). The U.S. central bank, the Federal Reserve (Fed), has responsibilities involving financial stability, monetary policy, and banking supervision. Climate change—defined in [a November 9, 2020, Fed report](#) as “the trend toward higher average global temperatures and accompanying environmental shifts such as rising sea levels and more severe weather events”—may impact each of these. This could occur either through physical risks, such as greater storms and wildfires, or through “[transition risk](#),” meaning the risk that changed government policies or market perceptions might lead to sudden asset price drops, such as for carbon-emitting industries. [The Fed report on financial stability](#) warned that sudden hazards can bring about direct losses that could negatively impact banks’ investments. It asserted that even slowly developing hazards such as rising sea levels could lead to sudden price drops for bank investments if abrupt changes in public perceptions about such risks emerges. This Insight focuses on the central bank’s role in banking supervision and climate change risks and on what the Fed and other banking regulators have done to address such risks.

Reliance on Existing Broad Guidance

Federal Reserve Board Chair Jerome Powell outlined in [an April 2019 response to a congressional request](#) that the Fed based its assessment of lending risks from climate-related events on a broader [1996 supervisory guidance](#) and additional [1996 supervisory letter](#):

[T]he Board issued supervisory guidance in 1996, to ensure that bank management takes into account all relevant risks in their underwriting and review practices. Our guidance with respect to credit underwriting and asset quality provides supervisors the flexibility necessary to address risks from severe weather events. In addition, our guidance also specifically addresses lending to sectors where assessments of these risks are critical for due diligence and underwriting.

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The [1996 guidance](#), under the Federal Deposit Insurance Act, sets out the safety and soundness standards regulators use to identify and address problems at insured depository institutions before capital becomes impaired. Its standards are general, giving flexibility to bank supervisors. For instance, the 1996 guidance with respect to asset quality requires banks to conduct periodic asset quality reviews to identify problem assets and to estimate inherent losses in those assets. The standards for credit underwriting require banks to “consider the nature of the markets in which loans will be made.” Broadly, these standards may encompass physical and transition risks for climate change as well, Powell’s letter suggests.

Calls for Climate Risk Stress Testing

Notwithstanding this 1996 guidance and its broad scope, some question whether climate-related risks should be more overtly addressed in banking supervision. For instance, a [2020 report by the Commodity Futures Trading Commission](#) on “Managing Climate Risks in the Financial Sector” recommended the adoption of climate risk stress testing for financial institutions.

Currently, the Federal Reserve stress tests large bank holding companies to make sure they hold sufficient capital to operate under potentially adverse economic conditions and shocks. Such [stress tests are conducted periodically](#) through the Fed’s Comprehensive Capital Analysis and Review (CCAR) program. Also, pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (P.L. 111-203 as amended by P.L. 115-174) and [its implementation](#), banks with consolidated assets of over \$250 billion must conduct their own annual stress testing, and those with \$100 million to \$250 billion in consolidated assets must undergo biannual stress testing. Although climate risk is not currently required in the CCAR stress testing program for most individual banks’ annual stress testing, a [March 2020 speech on climate change and bank supervision](#) by a New York Federal Reserve Bank official noted that a number of financial institutions have begun using “climate-related scenario analysis” of their own accord to model potential risks, such as those arising from severe weather events that might stress mortgage portfolios.

In addition, the New York State Department of Financial Services (NYDFS)—which oversees banks with assets totaling \$2.6 trillion—[announced on October 29, 2020, its requirements for climate risk stress testing](#). The NYDFS said all New York–regulated banking organizations must begin integrating financial risks from climate change into their governance frameworks, risk management, and business strategies. NYDFS said compliance should include an assessment of climate-change-related risk factors such as credit risk, market risk, liquidity risk, operational risk, reputational risk, and strategy risk.

Internationally, a [group of central banks called the Network for Greening the Financial System \(NGFS\)](#) has begun developing methodologies for conducting climate stress testing. At a November 10, 2020, Senate Banking Committee hearing, [Federal Reserve Vice Chair Quarles reportedly noted](#) that the Fed had sought membership in the NGFS group and expected to join by spring 2021. The European Central Bank in May 2020 released a [supervisory guide to climate-related and environmental risks](#) that calls on banks to develop climate-related stress scenarios and consider such risks when developing strategy and risk management plans.

Climate stress testing could pose significant challenges that differ from the existing CCAR stress tests already conducted by the Fed. For instance, [one banking industry white paper](#) noted that while there is extensive historical data on the interactions between macroeconomic and financial variables, there is far less data on the interaction between climate events and financial variables. Also, climate stress testing would be aimed at measuring future effects that may not emerge in a linear fashion but may accelerate, adding further difficulty to modeling, it noted. While, in the United States, existing CCAR stress testing typically extends to nine fiscal quarters, the effects of climate change are estimated on longer time horizons—over multiple decades—adding to uncertainty. In addition, determining financial effects of climate change involves the extent to which government policies may change. This remains highly uncertain yet would likely have significant effects on any “transition risk.” Relative to traditional capital

stress testing, climate stress testing appears more sensitive to modeling criteria and assumptions, which could create greater variance in outcomes.

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