



WHITE PAPER

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ECB 2022 Climate Stress Test Calls European Banks to Action

On July 8, 2022, the European Central Bank (“ECB”) released the results from its annual stress tests, this year focused on banks’ ability to incorporate climate risk stress testing into their risk management frameworks. The report found that most banks have not developed the adequate processes to incorporate climate risks into their stress-testing framework. The ECB will not issue any immediate binding decisions on banks. The ECB performed the review as a learning exercise, in which they will take the results and incorporate them into their upcoming guidance. The report highlights several areas of concern for the ECB. A significant area of concern for banks is the lack of climate-related data available to credit institutions. These areas of concern foreshadow future regulations from the ECB and banks should begin to review their stress-testing frameworks and improve climate data collection processes in response to the predicted ECB rulings.

OVERVIEW OF RESULTS

Overall, the ECB reported that banks have made progress in their climate stress-testing abilities, but a majority of banks do not adequately incorporate climate risk into their risk management. The ECB conducted the review in three modules that look qualitatively and quantitatively at how banks incorporate climate risks into their stress tests and how exposed banks are to the transition and physical risks of climate change. The ECB found that a majority of banks do not use a climate stress-testing framework. Banks that lack this framework often did so because they do not have enough data to adequately make the risk projection. Although banks are heavily exposed to climate change-related risks, the level of exposure is varying between the types of different banks.

EXPLANATION OF METHODOLOGY

The ECB conducted the assessment as a “bottom up” review. Applying data provided by the banks, the ECB conducted the tests in three modules.

Module 1

Module 1 involved a qualitative questionnaire that aimed at assessing the banks’ climate stress-testing frameworks. The questionnaire included asking banks about their appetite for risk, integration of climate stress tests into their overall business strategy, and future plans for climate stress tests. The goal of this module was to provide for a uniform assessment of banks’ climate risk stress-testing frameworks.

Module 2

Module 2 required that banks provide a granular breakdown of their income (two-digit level), using the NACE (Statistical Classification of Economic Activities in the European Community). In addition to this breakdown, banks also had to report their 15 biggest non-SME (non-small and medium-sized enterprise) corporate exposures for each high climate impact sector as defined by the Technical Expert Group on Sustainable Finance (“EC TEG”).

Module 3

For Module 3, banks had to provide projections for how they would fare under different climate scenarios and risk areas.

These projections were all done over a 30-year time range, and banks would assume a dynamic balance sheet that would change over this time horizon. For physical risks, banks were asked to provide credit risk projections under a drought, heat and flood risk scenario, and projections for how their balance sheets would fare in different transition scenarios based on possible climate policy paths and timelines. Under a long-term (30 years) period, banks had to provide projections under three different policy paths. The paths were: (i) an orderly transition; (ii) a delayed, disorderly transition; and (iii) a “hothouse world” with unchanged policies.

In the orderly scenario, the ECB assumes that climate policies are introduced early on and gradually become more stringent. The scenario further assumes that global warming is limited to 1.5°C based on climate policies and innovation and net-zero carbon emissions are reached by 2050. The orderly scenario minimizes the costs resulting from the energy transition, and the low amount of warming lowers the physical risk of climate change.

In the disorderly scenario, the ECB assumes that new climate policies are not introduced until 2030. As a result, deciders make more drastic and rapid policy changes to limit warming to below 2°C. This scenario results in carbon prices spiking due to policymakers’ constraint to more drastically address climate change. Since the warming is higher, banks must also deal with higher physical risks of climate change.

In the “hothouse scenario,” no new climate policies are implemented, and warming increases to 3°C. Because no new policies are implemented, banks do not have to cope with transition risks. However, the increased warming creates a large amount of physical risks that banks will see in the second half of the 21st century.

The ECB emphasizes the importance of how carbon pricing is affected by the different scenarios. In the orderly scenario, the carbon price starts at a high level and gradually increases. In the disorderly scenario, the price starts at low amount, but policymakers have to increase it rapidly to meet the climate goals. In the hothouse scenario, carbon pricing stays at a low level. The price of carbon is an important driver of the transition costs.

Banks also had to make projections under short-term, three-year scenarios that consisted of a front-loaded, disorderly transition.

FINDINGS

Stress-Testing Capabilities

The ECB found that banks had improved their stress-testing capabilities since the last review in 2021. The percentage of banks that performed a climate-related stress test sat at 25% in 2021, but in the 2022 climate stress test, the percentage rose to 40%. However, the ECB noted that while the improvement deserves praise, 40% still means that more than half of banks do not incorporate climate risks into their stress tests. Additionally, 40% of the banks with climate stress-testing measures do not incorporate the results of the tests into their business strategies.

Other findings include:

- Sixty percent of banks with a climate-risk stress-testing framework do not currently disclose or intend to disclose any results of the stress tests.
- Ninety-three percent of banks with climate stress-testing frameworks have developed a validation process. However, 75% of them do not ensure independence between the development and validation processes, as the same business unit is responsible for developing and validating the data.
- Forty percent of banks with a climate-risk stress-testing framework already in place do not currently involve the internal audit group in reviewing the framework.
- For risk types, 71% of banks with a climate stress-testing framework include at least physical or transition risk in the scenarios they consider. Eighty-one percent of the banks consider transition risk. Only 24% consider liability and reputational risk.
- Thirty-seven percent of banks with a climate stress-testing framework in place include only between one and two balance sheet climate-risk transmission channels. Thirty-five percent include only between one and three portfolios (e.g., corporate loans, retail household loans, etc.). For modeling of climate risk, only 22% of the banks apply or are considering applying a dynamic balance sheet approach for both transition and physical risk.

- Around 75% of banks that have a climate stress-testing framework in place report that climate-related and environmental events are included in their operational-risk stress-testing scenario analysis. For reputational risk, less than 40% of the banks indicate that climate-related and environmental events are included.

Findings Related to Enhancing their Climate-Risk Stress-Testing Frameworks

- Fifty percent of banks that currently do not have a climate stress-testing framework in place indicate that they need at least one to three years to incorporate physical and/or transition climate risk into their stress-testing framework.

Banks' Exposure to Climate Risks

- On average, 60% of the surveyed banks' interest income came from business with nonfinancial corporate entities that belonged to 22 carbon-intensive sectors. Development banks/promotional lenders tended to be more reliant on these carbon-intensive businesses, while custodians, asset managers, and globally systemically important banks were less reliant. The reliance on these carbon-intensive industries exceeds the industries' relative weight to the EU economy as a whole.
- The combined weight of the seven most greenhouse gas ("GHG")-emitting sectors represents on average 28.8% of nonfinancial corporate exposures for banks related to the 22 NACE sectors considered in the relevant module.

Banks' Ability to Withstand Climate Change Scenarios: Transition Risk

- In the short term, banks are vulnerable to a non-negligible increase in credit risk impairments. However, banks are better equipped to incorporate short-term climate risk into their risk-management framework.
- In regard to long-term projections, losses were the lowest in the orderly transition scenario. Where they were lower than in the scenarios was where the transition was delayed or did not occur.
- Banks' exposure to the real estate industry is especially vulnerable in the flood risk scenario. This is because of the expected drop in real estate prices in areas at risk for flooding.
- Banks with large exposure to outdoor, labor-intensive sectors are the most vulnerable to drought and heat. The

drought and heat scenarios forecast an overall decrease in sectoral productivity. The decrease is significantly higher in outdoor, labor-intensive sectors such as agriculture and construction.

- The specific physical risks depend on location. High heat and drought are a larger issue in the Mediterranean area than in the north of Europe. Physical risks stemming from floods depend on the geography of the area and vary significantly within a country. Additionally, the physical risks associated with flooding and heat/drought are different. Flooding heavily affects real estate, while drought/heat most negatively affects outdoor, labor-intensive industries such as agriculture and construction.

Takeaways for Banks

How should banks respond to the findings in the report? First, banks should be aware that the ECB will use this climate stress test as a learning exercise. The banks that participated in the review received individualized feedback for how they can enhance their climate stress-testing abilities and better understand the exposure they face related to climate change.

Second, the ECB will take their findings from the climate stress test and incorporate them into their upcoming Supervisory Review and Evaluation Process (“SREP”). The SREP will also consider the results from the thematic review on climate-related and environmental risk.

Third, the ECB provided a list of best practices it sees emanating from the findings under review. The best practices included integrating climate risk into banks’ Internal Capital Adequacy Assessment Process, or ICAAP, understanding climate risk at the sector or even firm level to understand the wide range of climate risks that different industries and businesses create, and creating long-term plans that incorporate concrete green transition targets. Regardless of the specifics of the suggested best practices, banks need better climate data to manage the risks of climate change.

Fourth, the report should be read as one part of the ECB’s broader crackdown on environmental policy and finance. Banks’ balance sheets reflect how banks interact sustainably with the area of climate change; at this stage, the ECB is worried that banks do not have the data or governance structures to understand how the two are connected.

DATA ISSUES

The ECB’s report stressed the lack of data that institutions have at their disposal to understand how climate change would affect their operations. Banks that did not have climate stress-testing frameworks often reported that they did not have enough climate-related data to perform a meaningful risk analysis. Within banks that did have climate stress tests, the climate data is not available to the relevant business areas. According to the ECB, virtually all banks stated the need for better climate data. Banks expect to remedy this issue through better data collection from counterparties as well as engaging with data providers. When measuring exposures, banks are subject to limited availability of GHG emissions data. Banks then have to rely heavily on approximation techniques and/or external providers, which may affect accuracy and conservativeness of banks’ estimates regarding carbon intensity.

The report states that a large number of banks rely on proxy estimates for their climate risk-management framework. The ECB commends this a beneficial first step for better data collection. However, banks will need to further evaluate and invest in their estimation methodology to ensure that the proxies are adequate substitutes for the unavailable data.

While banks are advised to follow the ECB’s recommendations and work with their clients to ensure more accurate data for climate stress tests, the forthcoming Corporate Sustainability Reporting Directive (“CSRD”) should ease this data collection. Under CSRD, corporations have to begin reporting data on a number of nonfinancial categories, including environmental impact data. Unlike previous disclosure requirements that dealt only with certain large companies, CSRD applies to all large companies and all companies listed on regulated markets. While certain data that the ECB noted banks were lacking for their climate stress tests will be made public under this disclosure, the impacted businesses will not release their first respective disclosures until 2024, covering the year 2023. The time gap means that banks should not wait until disclosure season 2024 for their clients to begin making public disclosures to start implementing climate stress tests. The almost two-year time gap is a rather critical period banks should use to better align themselves with the ECB’s broader climate goals, and they should continue to work directly with customers to understand the climate risks the bank faces.

GREENWASHING

The climate stress test results could also indirectly increase the risk of “greenwashing” related litigation. In general, “greenwashing” (which is a concept not yet defined under the current legislation) involves the marketing of an asset, security, or any other financial product as “green” or “sustainable,” when the asset, security, or financial product is not in fact “green” or “sustainable.”

A party can be found guilty for capital investment fraud if it shares incorrect information or conceals disadvantageous facts about an investment.

The latter pathway to “greenwashing” related capital investment fraud is a larger risk for banks following the climate stress test. The ECB’s conclusion focuses on banks’ lack of data to understand the climate impact of their investments and exposures. Banks “greenwash” their products when their marketing of their products as “sustainable” does not match the hard “sustainable” data of the investments. Now, should banks incorporate climate stress testing and incorporate the necessary data, they would have grounds and data to support how “sustainable” their products actually are. The emphasis

on climate stress testing will likely make it harder for banks to avoid criminal and regulatory penalties associated with “greenwashing” since authorities could leverage a bank’s internal data used for stress testing and compare that with how the bank markets its products. The ECB currently believes that banks do not have enough information to understand the climate impact of their investments and exposures. As such, the ECB’s likely forthcoming requirements to collect climate information may increase “greenwashing” risks on banks.

A benefit of proper climate data collection and stress testing would be avoiding the costs of restructuring loans with carbon-intensive industries and those most affected by high heat, flooding, and increased risks of drought. Including climate data in the loan-granting process enables banks to better understand the risk embedded in their loans. Banks should involve borrowers in this process and incorporate these risks into their lending practices.

While not explicitly stated in the report, a likely result of the ECB’s findings is to increase the capital requirements for banks in order for them to withstand the economic effects of climate change.

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