Ceres Accelerator
FOR SUSTAINABLE CAPITAL MARKETS

July 15, 2024

Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel
Switzerland
Via BCBS Comment Upload

Re: Response to BCBS Discussion Paper: The Role of Climate Scenario Analysis in Strengthening the Management and Supervision of Climate-Related Financial Risks

Dear Basel Committee on Banking Supervision:

It is a pleasure to submit comments on behalf of Ceres and the Ceres Accelerator for Sustainable Capital Markets. Ceres is a nonprofit advocacy organization with over 30 years of experience working to accelerate the transition to a cleaner, more just, and sustainable world. Our Investor Network currently includes over 220 institutional investors that collectively manage over $44 trillion in assets. Ceres is a founding partner of the Net Zero Asset Managers Initiative and the Paris Aligned Investor Initiative, which supports investors in aligning their investments and portfolios with the goal of a net zero emissions economy by 2050 or sooner. Our Company Network includes 50 major corporations representing industries and sectors across the economy with whom we work on an in-depth basis on climate strategy and disclosure, among other issues. Our Policy Network includes some of the most well-known brands in the U.S. with whom we work on a range of state and federal policy issues.

The Accelerator aims to transform the practices and policies that govern capital markets by engaging federal and state regulators, financial institutions, investors, and corporate boards to act on climate change as a systemic financial risk. The comments provided herein represent only the opinions of Ceres, and do not necessarily infer endorsement by each member of our Investor, Company, or Policy networks.

I. INTRODUCTION

Ceres has made extensive efforts to improve climate-related financial risk supervision, management, and disclosure. This includes engagements with and comments to U.S. banking and securities regulators, as well as the BIS and other international organizations and governments. Last year, we provided feedback to the Federal Reserve on its pilot climate scenario analysis (CSA) exercise with the six largest U.S. banks, and reviewed progress of U.S. federal financial regulators on conducting CSA in our annual Climate Risk Scorecard. We have also provided feedback on multiple BCBS consultations, including its climate principles and disclosure of climate-related risks. While CSA is not the only prudential tool regulators and financial institutions should employ

when undertaking climate risk management, it is an important component in identifying potential exposures and how to address them – including associated opportunities.

II. RESPONSE TO QUESTIONS

A. Assessment of Business Model Resilience and Business Strategy Building

1. *Q1: How does the role of CSA vary based on the objectives listed above, and are there other prudential objectives where CSA could be relevant?*

Objectives (A) risk identification, (B) risk management processes, (C) internal and supervisory capital and liquidity assessments, and (D) assessment of business model resilience and business strategy building correspond to the roles listed in the Annex:

Identify and quantify climate-related financial risks	A, C, D
Incorporate risks assessed as material over relevant time horizons into their internal capital and liquidity adequacy assessment processes, including in their stress testing programmes where appropriate	B, C, D
Consider a sudden shock scenario for the trading book	A, C, D
Assess the resilience of business models and strategies	A, B, C, D
Determine the impact on the overall risk profile	B, C, D
Identify relevant climate-related risk factors	A
Measure vulnerability to climate-related risks	A, C, D
Estimate exposures and potential losses	B, C, D
Diagnose data and methodological limitations	A, B
Inform the adequacy of risk management frameworks	B, C, D
Inform the adequacy of risk mitigation options	B, C, D
Ensure banks identify and regularly assess the impact of climate-related risk drivers on their risk profile	A, B, C, D
Ensure that material climate-related financial risks are adequately considered in their management of credit, market, liquidity, operational and other types of risk	B, C, D
Ensure banks consider a range of mitigation options to manage and control material climate-related risks	B, C, D
Ensure banks consider climate-related financial risks assessed as material over relevant horizons within their internal capital and liquidity adequacy assessments	A, B, C, D
Ensure banks assess the resilience of their business models and strategies to a range of plausible climate-related outcomes	A, B, C, D
Identify relevant risk factors	A
Size portfolio exposures	A, C, D

Identify data gaps and inform the adequacy of risk management approaches	A, B, C, D
Evaluate a bank's financial position under severe but plausible scenarios	B, C, D

Other relevant roles of CSA include:

- Identifying transmission channels
- Identifying sectoral and geographic concentrations
- Distinguishing how different climate risks may be correlated and how feedback loops may amplify risks
- Identify how climate risks are interconnected with other risk categories such as operational, credit, market, and reputational
- Identifying how climate risks may result in financial contagion
- Ensure material risks are communicated with stakeholders including regulators and investors
- Prioritizing research and setting policy based on identified risks, concentrations, and data/methodological gaps

Other prudential objectives where CSA is relevant include:

- Enhancing disclosure and transparency of risks[1]
- Assessing financial system-wide risks
- Assessing macroeconomic impacts
- Informing policymakers by providing evidence-based analyses of potential risks and their implications for individual firms and the financial system as a whole
- Informing policymakers how different climate scenarios may impact various market segments (e.g. firm size, geography, demography) asymmetrically

[1] Disclosure of information related to CSA methodology, objectives, data, inputs, and results supports prudential objectives, providing information on exposures and vulnerabilities that allows regulators to assess bank management of those risks, whether additional actions are needed, and potential impacts on the financial system more broadly. There is also growing concern about the safety and soundness of banks' long term financial decisions, and transparency and public access would go a long way to addressing these questions. Multiple disclosure standards are emerging globally – e.g. IFRS, EBA, U.S. SEC – and a consistent framework would facilitate easier comparisons within and across financial institutions, helping stakeholders assess overall risk profiles. We encourage the Committee to integrate CSA-related information into its final framework on Pillar 3 disclosure requirements for climate-related financial risks.

B. Building Constraints for the Application of Scenario Analysis and Stress Testing

1. *Q2: What are the key challenges in the application of CSA and how can they be overcome?*

Data availability and quality

Reliable and comprehensive data on climate risks and their financial impacts is often still lacking, and historical data is increasingly insufficient to project future climate scenarios accurately. Additionally, even with considerable client engagement, institutions face difficulty in obtaining borrower-specific climate data (e.g. GHG emissions). Where direct data is unavailable, CSA can use proxies or estimates supplemented with expert judgement and peer-reviewed methodologies, as well as a combination of top-down/sectoral statistics and bottom-up/firm-level data to improve accuracy. Banks and regulators can also collaborate with each other, other governments, third-party data providers, academic institutions, and climate scientists to access high-quality data, eventually building out internal data collection and data management capabilities to improve quality and granularity.

Model selection and standardization

The nature of climate risk makes it difficult to standardize assessment approaches, with long time horizons and uncertainty around how policy and socioeconomic factors may evolve or how risks vary by region and sector. Many institutions are unsure which climate scenarios are most relevant for their business model, or the most relevant scenarios may not provide sufficient detail in some areas critical to that institution. CSA can provide a framework for exploring how risks may evolve through a variety of models and scenarios, capturing a wide range of variables, transmission channels, and outcomes, including best- and worst-case scenarios – with model characteristics and key scenario features differing based on the purpose of the exercise (e.g. exploratory v. organizational resilience v. prudential, micro- v. macroprudential, etc.).

Sensitivity analyses can also help to understand the impact key assumptions and parameters have on CSA outcomes. As models improve, banks can use a mix of climate-economy models and adapted macroeconomic models to develop more comprehensive scenarios. Regulators should leverage the widely utilized frameworks provided by NGFS, IEA, and TCFD to develop scenarios suitable for their regulated entities. Regulators should also develop and provide clear guidelines, standards, and best practices to ensure comparability across firms. However, given the uncertain nature of future climate risk and limited granular data availability, using the same models and methodologies could lead to major systemic risk if assumptions are biased or misunderstood. To help counteract this possible risk and capture a more complete view of exposures and vulnerabilities, regulators should also employ qualitative exercises. Likewise, scenarios should limit reliance on unproven technologies such as carbon capture, particularly in net-zero scenarios.

Long time horizon

Modeling the impacts of climate scenarios over long time horizons involves high uncertainty and requires assumptions about future conditions. The NGFS notes that "[s]ome studies have used innovative approaches to account for these potential non-linearities but are still subject to uncertainty about future responses and adaptation." This may substantially underestimate the impacts of climate risk on individual institutions and the financial system as a whole. To address these issues in their 2021 exercises, the European Central Bank and the Bank of England had participants assume the nominal size and composition of their balances sheets to be fixed in the first part of the exercise while removing the constraint in the second part, instructing participants to qualitatively and quantitatively identify how they would manage and reduce their risks.

Exogenous treatment of climate risk

CSA generally does not identify financial institutions as endogenous to climate risk. However, financial institutions often contribute to the underlying causes of climate risk through financing and investing in fossil fuel companies and other carbon-intensive industries. These risks permeate the financial system through the pooling and selling of loans, mortgages, and other assets, as well as through credit exposures, hedging, and insurance coverage. A financial institution's own actions that may contribute to climate risk at present or in the future should be considered in scenario building and as part of risk mitigation.

2. *Q3: What are the key areas where CSA methodologies and capabilities need to be further developed to be useful and relevant for the different objectives listed in this paper?*

CSA methodologies and capabilities need to be further developed in several areas to be useful and relevant for the objectives identified by this discussion paper, including:

- Data collection – the availability and quality of climate-related data at a granular level is needed to better identify specific exposures and sensitivities

- Integrated models – models must be able to integrate the interaction between physical and transition risks, as well as the interactions between risks or compounding effects of multiple concurrent or consecutive events – which may vary based on sector and region

- Expanded risk assessments – scenarios should capture impact on all traditional risk categories (credit, market, operational, liquidity) as well as a wider scope of physical and transition risks (e.g. multi-hazard and multi-risk scenarios, second-order impacts, correlated risks, contagion) across all relevant portfolios, sectors, and geographies

- Insurance assumptions – the ability of insurance to act as a mitigant by absorbing losses and tail risks is increasingly uncertain; models should incorporate a variety of assumptions regarding insurance availability and coverage

- Tipping points – as global temperatures surpass the 1.5°C threshold, there are likely to be abrupt and nonlinear changes in the climate system that are not accounted for in the quadratic damage function used in most CSA models; logarithmic damage functions may provide more realistic results

- Climate scientists – scenarios must be informed and reviewed by climate scientists and reflect the most current climate science

- Longer time horizons – development of methodologies that more accurately project and assess long-term climate impacts and financial and economic impacts are necessary to fully understand the risks banks face to their safety and soundness

- Just transition – historically marginalized communities, low income communities, and other socially and financially vulnerable communities bear the brunt of climate risks as well as risk mitigation efforts; scenarios should incorporate how actions to mitigate climate risk may impact these communities as well as how not incorporating just transition principles into risk management processes will impact efforts to mitigate climate risk on both a micro and macro level, as banks can play a unique role in furthering the transition across the real economy

- Capacity building – regulators and banks need to build internal expertise in climate risk assessment and scenario analysis, and how these risks interact with traditional risk categories

C. Key Features and Usage-Specific Considerations for CSA

1. *Q4: Are the key features listed above appropriately calibrated for a range of CSA exercises, and should other features be considered?*

The features described by the Committee are appropriately calibrated. Additional key features could include:

- Interoperability – to ensure CSA tools and methodologies can integrate with other risk management systems and frameworks

- Scalability – to ensure CSA methodologies can be scaled up or down depending on an institution's size and risk profile

2. *Q5: How does the design of CSA exercises vary depending on the objectives? Please elaborate on the main usage-specific considerations for each of the different objectives.*

Risk identification

- Degree of standardization – some standardization is necessary to compare risks across institutions, but customization based on risk profiles will help identify unique risks material to individual institutions

- Time horizons – both short- and long-term scenarios will help capture immediate and emerging risks over varying time periods

- Severity of scenarios – a wide range of scenarios from moderate to severe will help ensure identification of potential risks and severity of those risks, including extreme tail events

- Baseline selection – a realistic baseline should incorporate some degree of climate impact, ensuring relevance to current and anticipated conditions
- Granularity – detailed sectoral, geographic, asset, and customer data is necessary to identify and measure specific risks, including location-specific hazards to capture idiosyncratic risks

- Balance sheet assumptions – both static and dynamic balance sheet assumptions will help assess how risks evolve under current conditions and future projections

- Analytical frameworks – use of a variety of models, including those capable of capturing non-linear and complex interactions between risks, will help capture a wide range of variables, transmission channels, and outcomes

Risk management processes

- Degree of standardization – some standardization is necessary to compare risks across institutions, but institutions should be able to adapt models to reflect their material risks

- Time horizons – medium- to long-term horizons that align with strategic risk management planning and mitigation strategies will more accurately reflect actual risk and provide a more comprehensive analysis for banks and their customers

- Severity of scenarios – a wide range of scenarios from moderate to severe will help test the robustness of risk management processes

- Baseline selection – a baseline that reflects typical conditions with moderate climate impacts will provide a comparison point from business as usual

- Granularity – granular data relevant to key risk management areas, such as critical sectors and geographies

- Balance sheet assumptions – dynamic balance sheet assumptions will help evaluate the effectiveness of management actions over time

- Analytical frameworks – models that are specifically designed for assessing the efficacy of risk management processes and strategies with supplemental climate-specific may help avoid limitations of models typically used for shorter time horizons

Internal and supervisory capital and liquidity assessments

- Degree of standardization – standardize scenarios, variables, and data elements to ensure comparability across institutions and facilitate regulatory oversight

- Time horizons – short- and medium-term horizons will align with capital and liquidity assessment frameworks, while longer-term horizons of 20 or 25 years may more accurately reflect financial viability and likelihood of default

- Severity of scenarios – severe scenarios that stress capital and liquidity positions will help ensure resilience under shocks and prolonged extreme conditions

- Baseline selection – a baseline that aligns with regulator expectations and typical stress-testing practices, modified as those expectations evolve

- Granularity – MEV-level granularity with use of proxy data to run internal assessments

- Balance sheet assumptions – static balance sheet assumptions to highlight vulnerabilities without the influence of management actions

- Analytical frameworks – leverage traditional stress testing models to evaluate capital adequacy and liquidity for short- and medium-time horizons

Assessment of business model resilience and business strategy building

- Degree of standardization – high customization to reflect specific strategic considerations and unique business models of each institution

- Time horizons – long-term horizons to evaluate the resilience of business models to structural changes due to climate risks

- Severity of scenarios – scenarios ranging from moderate to severe, including best- and worst-case scenarios, to test robustness of business strategies under various conditions

- Baseline selection – a baseline that utilizes projected future trends and challenges, enabling strategic planning

- Granularity – detailed data on specific business lines, products, and geographic areas is essential to assessing business model resilience

- Balance sheet assumptions – dynamic balance sheet assumptions to explore how strategic adjustments can mitigate risks and enhance resilience, and capture assumptions from transition plans of banks and their clients

- Analytical frameworks – models designed for strategic planning, focusing on long-term impacts and adaptation strategies

3. *Q6: What additional usage-specific considerations are relevant for each of the different objectives of CSA listed in this paper and why?*

We recommend an additional usage-specific consideration. To consider climate risk posed to banks more comprehensively, BIS should incorporate indirect effects. Ceres' 2020 report on banks' transition risk emphasizes the systemic nature of climate risk, illustrating how banks' first-round – or direct – losses will be significantly amplified by second-order effects from counterparty exposure to other financial institutions as well as third-order effects as firms sell to maintain compliance with capital ratios. Likewise, Ceres' 2021 report on banks' physical risks highlights the systemic nature of climate risk due to the interconnectedness across financial sectors, including supply chain disruptions and labor-related productivity loss. Incorporating impacts could shed light on critical financial stability concerns for these financial institutions and the underlying capital markets. BIS should also assess the impacts on other assets outside of a bank's loans as part of the analysis, especially if they add to balance sheet exposure. Our recent derivatives report shows that other assets like derivatives could amplify shocks within a financial institution.

4. *Q8: What features and measures could be adopted in the future to enhance the utility of currently available scenarios (eg NGFS, IEA, IPCC)?*

Institutions should integrate firm-level information from client engagements in their analysis. This is critical as it would allow incorporation of more accurate client-level data instead of banks' assumptions of client risk. Many U.S. banks are already engaging their clients on climate issues. Central banks in other jurisdictions including the Bank of England, Bank of Japan, and the Hong Kong Monetary Authority have included this type of information in their respective climate scenario analyses. CSA should also include second-order impacts such as supply chain disruptions, productivity loss, and, contagion channels, and transparently state assumptions regarding both demand and prices for commodities (including as fossil fuels and agricultural products).

In countries where regulators have conducted or plan to conduct top-down or pilot CSA, they can establish feedback mechanisms to gather input from financial institutions and the public on the CSA process and address issues and concerns to help improve future methodology and design. In countries where it is not yet feasible to conduct market-wide CSA, regulators could consider including more natural disasters (physical risk) as part of operational risk and the diminishing or

exit of natural disaster insurance (transition risk) as part of market risk in the scenario design process.

III. CONCLUSION

We thank the Committee for the opportunity to respond to this discussion paper, and would be pleased to discuss any questions you may have on our feedback. Please contact Kelsey Condon (kcondon@ceres.org) or Ava Gulino (agulino@ceres.org) at your convenience.

Sincerely,

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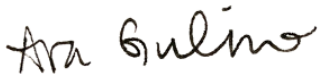

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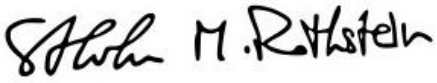

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