

Mr. Neil Esho
Secretary General
Basel Committee on Banking Supervision
Centralbahnplatz 2
4051 Basel
Switzerland



Submitted electronically

15 July 2024

Re: IIF/ISDA Public Comment on the Basel Committee’s Discussion Paper on ‘The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks’

Dear Mr. Esho:

The Institute of International Finance (IIF) and the International Swaps and Derivatives Association (ISDA) appreciate the opportunity to provide public comments to the Basel Committee on Banking Supervision (“BCBS” or the “Committee”) on its request for comment on the Discussion Paper, “The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks,”¹ issued on April 16, 2024 (hereafter “the Discussion Paper” or “DP”). The IIF is the global association of the financial industry, with around 400 members from over 60 countries, including commercial and investment banks, asset managers, insurance companies, ratings agencies, market infrastructure providers, and professional services firms. ISDA has worked to make the global derivatives markets safer and more efficient, with over 1,000 member institutions from 77 countries, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, international and regional banks, exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers.

Overarching comments

IIF and ISDA members welcome the BCBS’s work to promote a common understanding of and approach to the design and use of Climate Scenario Analysis (CSA), including Climate Stress Testing (CST) approaches.

CSA exercises, including supervisory exploratory exercises, can play an important role in enhancing understanding of the dynamics of climate-related financial risks on different time horizons. Banks across the world are increasingly using CSA as one input to a range of applications, including to inform risk assessment and management processes. In particular, CSA can support the identification and measurement of potential climate-related physical and transition risks, over different timeframes. As the BCBS has recognized in the DP, CSA practices

¹ <https://www.bis.org/bcbs/publ/d572.htm>.

are at an early stage of development and remain a highly complex and challenging pursuit with numerous limitations. Some of the challenges stem from the fact that climate-related financial risks are highly uncertain and difficult to measure, with the nature of the potential shocks differing across regions and banks' lines of business.

For this reason, it is important that any future BCBS guidance regarding CSA is principles-based, in the spirit of the current DP and the BCBS's 2022 "Principles for the effective management and supervision of climate-related financial risks" (hereafter referred to as the "BCBS Climate Principles").² Our members do see potential for greater coherence of supervisory exercises in particular as, to date, there has been significant variation between the stated objectives and designs of these exercises. This reduces the comparability of different jurisdictional exercises, increases complexity for participating financial institutions, and can create challenges for communication and comparison of results. It is important to strike the right balance in this regard; our members believe that while greater standardization of approaches could improve the comparability of results of supervisory exercises, adequate flexibility should be permitted in terms of the design, methodologies and approaches that banks use to conduct their internal CSA exercises to take into account idiosyncratic risks.

In addition, our members welcome the recognition by the BCBS that the field of CSA is highly dynamic and that practices are expected to evolve rapidly, especially as climate science advances. For this reason, any future BCBS guidance related to CSA would need to be periodically reviewed and potentially updated following a period of implementation, reflecting inputs from and experiences of banks, supervisors and other experts. More broadly, the IIF and ISDA members welcome continued engagement with the BCBS as practices related to the management of climate-related financial risks, including CSA, continue to develop.

Responses to specific questions in the DP

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?

Our members agree with the statements in the DP that the role and design of CSA vary significantly based on the specific objectives the exercise aims to achieve,³ and that the results of each such exercise should be interpreted and used appropriately. Aside from the comments below, our members do not think that the BCBS is missing any relevant objectives of CSA or CST in the context of bank and supervisor responsibilities. Reflecting the different potential objectives of CSA exercises, the design should be fit-for-purpose and the results should be interpreted and used appropriately. With respect to the four specific objectives suggested by the BCBS, we have the following observations.

(a) Risk identification

Our members agree that CSA is useful for risk identification at bank level, as well as at system-wide level through supervisory exercises. CSA has become a leading tool for forward-looking

² <https://www.bis.org/bcbs/publ/d532.htm>.

³ IIF, "Navigating Climate Headwinds: Reference Approaches for Scenario-based Climate Risk Measurement by Banks and Supervisors," July 2021.

risk identification over the range of potential time horizons over which climate risks can crystallize. CSA techniques can underpin risk-sensitive and forward-looking transition and physical risk identification at the exposure or counterparty level, as well as at the sectoral and geographical level.

(b) Risk management process

Our members agree with this potential objective of CSA exercises. Many banks have used CSA, alongside other tools and approaches, to inform their risk management processes in a qualitative way at least. While the outputs of CSA exercises may inform risk analysis, it is important to recognize that climate scenarios are not *forecasts* of what will happen, but rather a means of exploring how a specific climate scenario could translate into financial risk exposure given a specific set of variables. While this may be a helpful exercise for banks to gain insights into potential areas of vulnerability and financial risk transmission channels, it is not an indicator of the likelihood that these specific events will occur or that the resulting impacts will mirror the dynamics of the variables analyzed in the scenario analysis. As such, there is a high level of uncertainty around the underlying scenarios and their likelihood, which can generate considerable variation in estimates of expected impacts and complicates the use of CSA in informing risk management decisions—e.g., with respect to the use of some common risk management tools. The U.S. Federal Reserve Board’s (FRB) recently published summary of its pilot CSA exercise highlighted this challenge,⁴ noting that participants identified the high degree of uncertainty inherent to climate risk modeling, as well as the challenges created by such uncertainty in reliably and consistently quantifying the impact of climate-related risks, as factors impacting how the results of CSA exercises could be used going forward.

Caution is therefore required when interpreting results because of the high level of uncertainty associated with the climate scenarios and the absence of information on likelihoods, as well as some of the potential transmission channels to financial risks. These challenges are compounded by concerns about reliability and consistency of data and methodological limitations to assessing the impact of climate scenarios on financial risks. Many banks have started with targeted CSA exercises, e.g., focused on applying a physical or transition risk scenario to understand how that scenario would impact credit risk for key exposures, or for certain portfolios (such as real estate). However, with time and experience, some banks have broadened the scope of their internal exercises to consider impacts on a wider range of risk types (e.g., market risk⁵) and exposures, or to look at physical and transition risk drivers within the same scenario.

It is important that the BCBS DP is clear on the limitations of CSA. Some of the points under this objective in the DP about potential risk management applications of CSA results could be interpreted as suggesting that banks *should* take certain actions, which would be beyond the scope of the DP. We recommend the BCBS to avoid providing such guidance in any future guidance or other materials related to CSA. For example, references to “determining exposures and risk limits” may be viewed as suggesting that banks should adopt lending limits

⁴ See <https://www.federalreserve.gov/publications/files/csa-exercise-summary-20240509.pdf>. For example, “Participants suggested that climate-related risks are highly uncertain and challenging to measure. The uncertainty around the timing and magnitude of climate-related risks made it difficult for participants to determine how best to incorporate these risks into their risk management frameworks on a business-as-usual basis.”

⁵ ISDA, “[Climate Risk Scenario Analysis for the Trading Book - Phase 2](#),” February 2024.

specifically related to climate-related financial risks. As discussed above, however, climate scenarios are not forecasts and should not be used as such. For example, a bank may use the Network for Greening the Financial System (NGFS) Divergent Net Zero (DNZ) scenario to understand the likely impacts of a carbon tax on wholesale credit risk exposure in a carbon-intensive sector, but this says nothing about the actual likelihood of a government imposing a sudden carbon tax that materially impairs the financial position of a key sector on which that jurisdiction's economy depends.

Moreover, in line with existing risk identification processes, many banks are appropriately considering impacts of material climate-related financial risks alongside other material risk drivers on the overall risk appetite of the firm. However, mandating the creation of new lending limits specific to climate-related financial risk alone would be inconsistent with the regulatory expectation that banks' risk management frameworks include all material risk considerations to the bank. Further, this discussion is not consistent with the BCBS's existing approach to climate-related financial risks as risk drivers, rather than standalone risk types. As a driver of traditional banking risks, material climate risk considerations should be captured in existing risk limits along with all other material risk drivers. Moreover, it is important to stress that requiring an undue focus on metrics or limits from the perspective of climate risk drivers could introduce imbalance or an outsized focus on climate-related risk drivers within a bank's broader risk appetite framework. We note that the BCBS Climate Principles refer to a number of potential objectives for climate scenario analysis including "informing the adequacy of the bank's risk management framework, including risk mitigation options."

The DP includes a reference to the use of CSA in "pricing exposures" (page 3). It is not clear what is meant here, and any future BCBS materials related to CSA that reference this use of CSA would require additional explanation and consideration to clarify the BCBS's intent.

(c) Internal and supervisory capital and liquidity assessments

As recognized by the BCBS in its 2021 report on "Climate-related financial risks - measurement methodologies",⁶ caution is required when using CST to assess resilience, and several key conditions would need to be met before CST could be robustly informative to quantitative capital planning, including: maturity of data and tools; improvements in the knowledge of financial risk transmission channels; and inclusion of risks that could plausibly crystallize in the near-term.

While near-term CST could conceptually serve as an input to capital and liquidity adequacy assessment, it is currently challenging for many banks or supervisors to use it in a rigorous and consistent way given that some of the necessary foundations are not in place with respect to knowledge, data and modelling. Similarly, data quality and model validation approaches constitute headwinds to considering CST in an Internal Capital Adequacy Assessment Process (ICAAP), Internal Liquidity Adequacy Assessment Process (ILAAP) or broader Pillar 2 context.

Nevertheless, some banks have undertaken initial work to reflect material climate risk drivers within capital and liquidity assessments, as is indicated by the BCBS Climate Principles and required by some supervisory authorities across the world. Banks consider that climate risk

⁶ BCBS, "[Climate-related financial risks - measurement methodologies](#)," April 2021. Hereafter referred to as "BCBS 2021."

drivers should be approached in the same manner as other financial risk drivers when institutions run their capital and liquidity assessment process, with only those assessed as material over the relevant time horizon incorporated into the assessment.

The time horizons analyzed within capital and liquidity assessment processes are typically 3-5 years, or much shorter for trading book capital assessment (days or weeks), while climate-related risk drivers can cause risks to materialize over multiple timeframes. Though most regulators and banks have so far focused more on the use of CSA to explore the potential long-term effects of climate risks in the banking book, some climate risk factors can materialize in the near-term (for example, higher incidence of severe weather-related events and associated physical risks such as flooding in some regions), while others are more likely to unfold in the coming years, and some could be much more significant – under some scenarios – in future decades. It is important that any CSA or CST which is intended to inform capital or liquidity assessment processes captures risk that could crystallize over the appropriate time horizon for the prudential framework. There would be significant conceptual issues with calibrating capital requirements – which are intended to be a cushion against unexpected losses that could occur in the near-term in relation to a bank’s current exposures – for risks that could materialize in 10, 20 or even 50 years.

While various regulatory, bank and industry initiatives are now shifting their focus to the shorter-term effects of climate risk drivers and have made some progress on short-term scenarios,⁷ their focus has not been on the specific applicability of those scenarios to trading book assets and timescales. Thus, the lack of appropriate scenarios is a critical missing component to meet the objectives of CSA for the trading book.⁸ While short-term scenarios for the trading book should be able to capture instantaneous climate risk events, these should also be, to some degree, consistent with, and easily comparable to, existing longer-term scenario narratives.⁹

Notwithstanding the methodological nascence of CSA approaches and inherent uncertainty of modelling climate-related risks, it is also important to recognize that supervisory CSA and CST exercises completed to date, as well as many banks’ own internal analyses, have indicated that the impacts of climate-related risks on financial stability and/or institution safety and soundness are likely to be generally moderate and manageable over the short- to medium-term, but with the potential for more significant risks arising over the longer term under different scenarios.¹⁰ The results appear to indicate that most financial institutions would be able to absorb extreme but plausible climate-related risks over the near to medium-term with current capital levels, and these exercises have not so far indicated levels of risk to the banking system which would justify considering changes in the capital framework. Furthermore, where banks identify specific current or future risks to their balance sheet as a result of climate-related risk drivers, they typically take steps to manage or mitigate those risks as far as possible which limits the

⁷ For examples, see the following: UNEP FI, [“Economic Impacts of Climate Change: Exploring short-term climate-related shocks with macroeconomic models,”](#) May 2022. ECB, [“2022 climate risk stress test,”](#) July 2022. NGFS, [“Workstream “Scenario Design and Analysis, Mandate April 2022-2024.”](#) NGFS, [“Conceptual Note on Short-term Climate Scenarios,”](#) October 2023.

⁸ ISDA, [“Climate Risk Scenario Analysis for the Trading Book - Phase 2,”](#) February 2024.

⁹ ISDA, [“A Conceptual framework for Climate Scenario Analysis in the Trading Book,”](#) July 2023.

¹⁰ IIF, [“Navigating Climate Headwinds: Reference approaches for scenario-based climate risk measurement by banks and supervisors,”](#) July 2021.

potential financial risk exposure to the bank on an ongoing basis and underlines the importance of careful interpretation of CSA or CST results and taking a dynamic approach.

(d) Assessment of business model resilience and business strategy building

We would note that the concept of assessment of business model resilience relates to business strategy and strategic risk, which is different from the risk management focus of proposed objectives (a) to (c). It is important to distinguish between the use of climate scenarios as a forward-looking tool to inform strategic analysis and the potential impact of setting, meeting or not meeting targets and commitments, which is a part of broader business strategy and not prudential risk management.¹¹ In the context of its work and published materials, the BCBS should be cautious about framing use of CSA in a way that could potentially constrain firms' business models and strategic planning. With respect to banks' business strategy more broadly, what is important from a regulatory and supervisory perspective is that banks have in place sound governance and risk management frameworks.

Specifically, if this proposed objective is suggesting that a bank should use CSA to assess the "resilience" of any decarbonization targets or net zero transition plan which the bank may have (i.e., a bank's business strategy with respect to transition), it is important to be clear that climate scenarios are not forecasts and that banks should not be expected to rely on CSA to set business strategy. Further, it is important not to conflate the alignment pathways used for target-setting and transition planning with the scenarios that banks are using for CSA. Banks are using alignment pathways (e.g., IEA Net Zero Emissions by 2050) to align their portfolios with a target end-state, not to assess the resilience of the bank's strategy and business model against a forecast of how the energy transition will occur.

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

The following are general comments which affect the application of both bank and supervisory CSA exercises:

- **Uncertainty:** As noted above, climate scenarios are not forecasts of what is expected to happen, and there is a high degree of uncertainty around the likelihood, timing and magnitude of climate-related risks which can generate considerable variation in estimates of expected impacts. These uncertainties make it challenging to use CSA in risk management decision-making.
- **Data:** Despite significant efforts and investments, banks across the world continue to struggle with issues of gathering climate-related data, partly given their reliance on data provided by their clients and counterparties. Many firms rely on proxies and estimates, particularly for greenhouse gas (GHG) emissions, which are often shown to have a wide margin of error when cross-validated, and which introduce comparability issues across banks. At the micro level, insufficiently granular data about clients or exposures makes it challenging to accurately assess their vulnerability in a CSA exercise. At the macro level, paucity of climate-related variables and other necessary macroeconomic

¹¹ For example, the ISSB S2 disclosure standard describes that entities "shall use climate-related scenario analysis to assess its climate resilience" within the ISSB's strategy pillar.

variables which feature over a scenario horizon make it challenging to approach CSA modelling in a coherent way with the scenario narrative.¹²

- **Scenarios:** Challenges include the choice of appropriate scenarios for a given exercise objective, for example due to the lack of robust short- to medium-term scenarios of diverse severities, and the choice of the scenario severity as this must be commensurate with the intended objective of the exercise. For the currently available long-term scenarios, such as those that are being maintained by the NGFS, the level of information on transmission channel projections and granularity is often inadequate to permit tailoring to different geographic regions. This can lead to banks and supervisors individually expanding and supplementing with information in idiosyncratic ways, which may result in a lack of comparability. Other challenges include how to use or weight the results of multiple and alternative scenarios (e.g. ensuring cross-scenario consistency of assumptions), particularly given the absence of probabilities attached to alternative scenarios, and the tradeoff between use of standardized scenarios and relevant idiosyncratic scenarios/shocks for a bank's business model and footprint.
- **Modelling:** One challenge which straddles scenario development and modelling is that some of the existing public scenarios (e.g. the NGFS long-term scenarios) are heavily reliant on external integrated assessment models (IAMs) to support scenario building. In some cases, banks want to develop the tools to be able to influence the inputs to IAMs as part of scenario building for their own applications. Other modelling issues include a wide choice of modelling approaches, which are still evolving as general understanding of risk transmission channels from climate-related risk factors to traditional financial risk types develops. To assess financial risk impact, some banks use existing risk models with modified inputs or parameters (e.g. to assess impact on probability of default or loss given default for credit risk); however, this does not capture changes in historical relationships or account for new forms of system-wide or second-order effects. The inherently uncertain, novel and non-linear nature of climate change means that past events do not necessarily provide an accurate guide to potential future outcomes. This means that, for an accurate assessment of climate-related risks, models instead need to be based on a forward-looking view of the interaction between climate and the economy.
- **Model validation and governance:** It can be challenging for a bank to meet its existing general internal model validation standards for CSA exercises as these exercises often require use of new and sometimes low-quality data. The lack of data for back-testing and limited historical precedence – by virtue of the novelty of climate-related risk phenomena – make it difficult to assess the degree of uncertainty in CSA exercise results.
- **Interactions between climate and other risk drivers:** Our members agree with the DP's discussion of the still nascent understanding about the potential interactions between climate and other macroeconomic risk drivers. In order to make sure that risks are not 'double-counted', multiplied or missed in CSA and broader stress testing, greater research into the interactions is needed.

¹² For example, see Table 9 of recent [U.S. FRB CSA exercise](#) to see large number of macro variables, many of which need to be added to core scenario variables e.g. in NGFS scenarios.

In many cases, to address some of the above challenges it will be necessary to continue and expand public-private collaboration.

The advent of more widespread, reliable and standardized corporate disclosures (e.g. supported by jurisdictional implementations of the ISSB standards or the implementation of the Corporate Sustainability Reporting Directive in the EU) should help banks with their own data collection efforts. Banks are also assessing alternative and automated data solutions e.g. use of Big Data, machine learning and large language models, which could help to uncover insights with the intention of improving data quality and granularity.

Looking at more collaborative solutions, data pooling approaches or development and use of open-source platforms could also support industry efforts to fill data gaps. Common approaches to fill data gaps in CSA exercises would reduce variability in the methods used across banks; this could benefit supervisory engagement on banks' internal exercises and support supervisory exercises.

IIF and ISDA members welcome the current work by the NGFS to develop short-term scenarios for CST which are conceptually coherent with its long-term scenarios.¹³

We reiterate that CSA exercises conducted by central banks globally have indicated limited materiality of climate-related financial risk in the short-to-medium term as it relates to first-order impacts. More consideration is needed by central banks, potentially working in conjunction with academics and the private sector, to explore potential second-order impacts, compound risks and customer supply chain risks that could drive or exacerbate macroeconomic weakness, and how these climate-driven impacts could flow through to the broader financial system.

From the trading book perspective, the horizon of the climate risk scenario should be sufficiently short-term to be able to capture an instantaneous climate risk event and its effects on financial markets. In the absence of specific trading book CSA scenarios, a number of banks are using existing scenarios (for example, those developed by the NGFS, the European Central Bank (ECB) and the Bank of England (BoE)) as a starting point and modifying existing scenarios to make them more relevant to the trading book.¹⁴

Ongoing careful consideration is needed in relation to banks' internal CSA and to the communication surrounding results of supervisory exercises. It is important that banks and supervisors are able to undertake exploratory exercises without concern for pre-emptive disclosure of information that would almost certainly be misleading to some market participants who may not understand, for example, that climate scenarios are not forecasts.

Finally, one broader challenge faced by many banks relates to how they can achieve supervisors' expectations with respect to CSA exercises given current constraints in terms of data availability and quality, modelling, the need to rely on their client inputs, etc. We would encourage BCBS members to account for these constraints in supervisory engagement with banks, and not only call for additional conservatism in response to unknowns.

¹³ NGFS, "[Workstream "Scenario Design and Analysis, Mandate April 2022-2024."](#) NGFS, "[Conceptual Note on Short-term Climate Scenarios](#)," October 2023.

¹⁴ ISDA, "[Climate Risk Scenario Analysis for the Trading Book - Phase 2](#)," February 2024.

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?

Scenario design requires further development, such as short-term scenarios for risk assessment and those relevant for the trading book. Even when appropriate short-term scenarios are developed for trading book analysis, further enhancements and more granular data may be required to better assess climate risks for both transition factors and physical factors.

In relation to third-party scenarios, it should be made clear what the objective of the scenario is in order for firms to select the appropriate scenarios for CSA. Climate scenarios which provide a particular set of variables and resulting outcomes may be more appropriate for CSA for risk analysis purposes as these allow firms to assess and explore potential outcomes and vulnerabilities under this particular scenario. Climate scenarios should not be conflated with alignment pathways, which show what needs to happen in order to reach net zero by a particular date, and may be more appropriate for strategic purposes such as target-setting.

More work is needed to explore integrated scenario narratives which consider both transition and physical risk factors simultaneously, and to deepen understanding of the disaggregation of risk factors.

The level of comprehensiveness with which climate-related risks are being captured within CSA exercises is evolving and must continue to do so. While the main focus is on addressing the key drivers and primary impacts of climate risk, there are other areas that require further enhancements in capabilities. Examples include second-order effects (e.g. from climate risks to macroeconomic variables and then to banks' balance sheets, or the impact of a contraction in the supply of insurance on losses in the banking sector¹⁵), more analysis of the impact of physical risks on credit (i.e. corporate bonds) and equity exposures, and the impact of transition risk on mortgage exposures as the emphasis has been so far on physical risk drivers in relation to mortgages.

Ongoing collaboration between the financial industry, supervisory community and academia, including climate scientists, is very important to continue developing the technical underpinnings of CSA during this developmental period. For example, the challenges outlined in response to Q2 in relation to data, scenarios and modelling approaches.

It is also crucial to ensure that accounting for climate-related risk drivers, as considered in the context of capital and liquidity adequacy, does not lead to a double-counting of risks. More thinking is needed on how climate risk drivers in scenarios can be considered alongside stress events, such as a general recession, as aspects of the scenarios are likely to interact.

¹⁵ At present, banks do not always have full information on insurance coverage or the conditions in insurance contracts, which can be a significant data gap. This was also discussed by the U.S. FRB in the results of its recent supervisory CSA exercise.

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

We generally agree with the characterization of the key features and usage-specific considerations laid out by BCBS. The DP discusses important aspects of how firms can implement existing scenario analysis and stress testing frameworks, and the associated challenges.

The DP contains a thoughtful discussion of key features for all CSA exercises: motivation, comprehensiveness, plausibility, coherence, transparency, tractability and proportionality. Our members agree with the focus on “material and relevant risks” and on proportionality of CSA exercises to the risks.

While sensible, we would like to note that some of these features would imply demanding and challenging expectations for bank’s internal CSA exercises. It requires a lot of in-house expertise to develop CSA exercises according to these criteria; it would be a challenge for larger institutions, not to mention smaller banks. This is particularly the case in relation to comprehensiveness, coherence, and provision of historical data series. Historical data might not always be pertinent because some climate change factors are forward-looking by their nature.

In relation to the proposed ‘coherence’ key feature, scenario consistency is very important. While there are good reasons to distinguish the scenarios and shocks in shorter-term versus longer-term exercises, short-term scenario narratives should be consistent with, and easily comparable to existing longer-term scenarios (such as those provided by the NGFS), for example in terms of the science basis, narrative and core assumptions. To the extent that the NGFS can account for this in their work to develop short-term scenarios, it would greatly help scenario users including financial institutions.

Linked to the proposed ‘transparency’ key feature, particularly given the level of uncertainty embedded in a CSA exercise and also given the use of immature and nascent albeit improving datasets and models, an important aspect is the level of governance and controls surrounding an exercise.

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.

We believe that the proposed risk identification objective should be central to all forms of CSA that can inform the understanding of the transmission channels for climate risk factors and assess the potential severity of risk events that can be triggered by climate risk.

The risk management objective should leverage on the risk identification process to focus on material risks for the institution, taking into account the different horizons of analysis depending on the duration of the various portfolios and on the time needed to adapt an activity’s business model.

In relation to one of the proposed objectives of CSA exercises of informing internal capital and liquidity assessments, and as recognized by the BCBS in its earlier report on measurement methodologies for climate-related financial risks (BCBS 2021), significant caution is required when using CST to assess resilience. Notwithstanding the supervisory expectations which already exist in some jurisdictions in this area, IIF and ISDA members still see that several conditions would need to advance before CST could be robustly informative to quantitative capital and liquidity planning, for example:

- improvements in the knowledge of financial risk transmission from climate-related drivers;
- development of relevant short-term stress test scenarios to reflect risks that could plausibly crystallize in the near term;
- a pragmatic and proportionate approach to data quality and model validation approaches.

As approaches develop in this area, it is important that there is a focus on climate risk factors that are material over the capital or liquidity planning horizon in a severe but plausible stress scenario. Ultimately, greater research is needed to understand the interactions between climate and other macroeconomic risk drivers. Understanding this would, in future, benefit the efficiency and holistic nature of ICAAP and ILAAP exercises and should ensure that risks are not double-counted, multiplied or missed in stress tests.

As previously mentioned, we agree with the comments on standardization for supervisory exercises, i.e.: “one additional consideration is the level of standardization across different supervisory CSA exercises, as this may also make it easier for banks to successfully complete the exercises. Greater customization may increase the resource intensity to conduct these exercises for internationally active banks required to complete multiple CSA exercises.” However, as also recognized in the DP, increased standardization can reduce the extent to which idiosyncratic risks may be taken into account, and may restrict innovations in CSA design and approaches. The benefits of standardization versus the flexibility to tailor an exercise in the context of bank’s internal exercises need further analysis, as it is important for banks to have the scope to account for idiosyncratic risks.

As set out in the DP, there are different factors that would influence the modelling choice of a dynamic or static balance sheet, and the choice should be consistent with the objective of the exercise. In general, our members find a static balance sheet assumption to be more suitable in exercises that include a short time horizon (e.g. for the trading book), but increasingly unrealistic as the time horizon lengthens (e.g., certainly if longer than five years). While more realistic, modelling a dynamic balance sheet introduces a lot of complexity and require the bank or supervisor to make a series of assumptions. For example, it is extremely difficult to define the evolution of certain sectors that are currently transitioning or are expected to transition in the medium or long term as these are often influenced by exogenous factors such as jurisdictional policies or technological developments. Our members believe that supervisory exercises should provide clear instructions on the balance sheet assumptions expected given the objectives of that given exercise.¹⁶ Should supervisors choose to communicate quantitative results from an exercise, it is also important to provide explanatory

¹⁶ ISDA, “[A Conceptual framework for Climate Scenario Analysis in the Trading Book](#),” July 2023.

context around the supervisor's choice of a static or dynamic balance sheet and clarifying, for example., that use of a static balance sheet effectively assumes that a bank would not adjust its balance sheet to manage risk and that the quantitative results should not be interpreted as indicative of how banks would manage risk under the scenario explored.

Though the DP's discussion of how CSA should be sufficiently granular to understand changes in economic relationships is compelling, such granularity is still unrealistic given existing capabilities. Many banks are still adapting current models to estimate the potential impacts of climate risk drivers. Banks recognize the importance in firm-wide CSA exercises of sectoral and geographic granularity as the impact of a given scenario can vary significantly based on the specific economic sectors and geographies which may be affected. Further, we note that structural changes in economic relationships may be more relevant in longer-term scenarios and horizon scanning.

In relation to the discussion of a baseline selection, we think it is helpful as a general principle for authorities to focus more on a set of scenarios rather than trying to identify a particular likely baseline.

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

One additional usage-specific consideration is exercise scope, in terms of the portfolios in scope and the financial risk types assessed. For example, a granular risk identification exercise for a specific business line would be scoped differently to a broader firm-wide risk identification.

In relation to the time horizon, it is important to determine the relevant scenario horizon over which an event(s) could manifest. The horizon of a climate risk scenario for the trading book should be sufficiently short-term and be able to capture an instantaneous climate risk event and its subsequent effect on financial market variables. The scenario horizon is separate and distinct from liquidity horizons, where the latter relates to the time to liquidate or hedge the risk for different asset classes being assessed, and the former relates to the duration of a given climate scenario.

Q7. Which scenario and scenario features are used for the different objectives listed above (i.e. internally developed, those from scenario builders or a combination of the two)?

Scenario design is highly demanding both in terms of in-house expertise (when institutions need to develop detailed scenarios) and in terms of costs, whether a bank develops scenarios internally or if they procure them from outside of their organization.

Our members leverage a range of scenarios for internal analysis, including NGFS, ECB, BoE and other publicly available long-term scenarios, as well as internally produced or externally procured scenarios. The choice of the scenario or scenarios is an important decision - many banks use multiple scenarios and draw on publicly available scenarios, such as those listed above or those used in supervisory exercises, either applying them directly or as a baseline which they adjust. Some banks use internally developed scenarios which are appropriate for

their business model and geographical footprint. There can be challenges with using public scenarios, including whether they are sufficiently granular. In that vein, our members are supportive of the evolution of the NGFS scenarios over recent years as they have become richer and more widely applicable across jurisdictions.

It can be difficult to assess scenario *plausibility* by using the NGFS scenarios, alone. This can be a challenge when it comes to stress testing, which usually draws on severe *but plausible* scenarios and is traditionally used to estimate a probability of certain loss outcomes.

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

It is important that publicly available scenarios are reviewed and updated appropriately and frequently to stay aligned with the latest scientific and policy information, including in relation to progress towards jurisdictional net zero alignment goals.

Current scenarios would benefit from increased granularity and further details on sectoral and geographical dimensions (e.g. country-level or sub-national data) and the inclusion of a wider number of macrofinancial variables (e.g. CAPEX by technology, sector or region), which would limit the need for further modelling by scenario users to expand the scenarios.

Furthermore, additional information on developments in the energy mix, corporate and public capital expenditure and anticipation of technological innovation would also improve the usability of common baseline scenarios. To provide some specific suggestions:

- NGFS scenarios would benefit from providing demand by fuel type for each industry.
- IEA scenarios currently only cover energy-related sectors, but this can be limiting for scenario design and scenario consistency.

In addition, users, including supervisors, should also apply greater scrutiny to the short and long-term scenarios such as those that have been developed by NGFS. Some specific member suggestions for the NGFS scenarios include the following:

- Higher granularity in terms of sectoral and regional breakdown, e.g. more country-level or sub-national data, would be beneficial.
- Depending on technical feasibility in the model used, projected variables should have a corresponding historic source which was used as a starting point.
- Projections should be checked for plausibility with improved data quality checks.
- While there is currently good model documentation of the individual models, a more comprehensive documentation of the assumptions underpinning scenario variables would be welcomed as it would allow users to scrutinize, compare or reproduce the assumptions in their own models.

Q9. What alternative or novel approaches could supervisors consider for CSA and how might these be used for prudential purposes?

CSA is a leading tool for forward-looking analysis of potential financial risks due to climate-related factors. It is a versatile and flexible tool depending on the various design choices, as discussed in the DP. As such, banks' own exercises and supervisory exercises – if designed appropriately, as discussed in the DP and considering the comments in this letter – can contribute to the understanding of potentially idiosyncratic or systemic risks.

As approaches develop in this area, greater research is needed to understand the interactions between climate and other macroeconomic risk drivers, and their transmission to market/financial risk variables, including how changing business cycles and macroeconomic conditions can influence the impact or likelihood of certain climate-related factors. This would benefit the efficiency and holistic nature of banks' own ICAAP or ILAAP exercises, and supervisory exercises, and should ensure that risks are not double counted, multiplied or missed in stress tests.

Of course, banks and supervisors also use a range of other tools and models to inform analysis of specific exposures, counterparties or portfolios. CSA is part of the broader toolkit.

Q10. How could the effectiveness and efficiency of supervisory exercises be improved?

It is crucial that policymakers continue to consider how CSA exercises can be most efficiently used to meet the objectives identified by the BCBS, as appropriate in a supervisory context.

Based on our members' experience with multiple supervisory exercises around the world to date,¹⁷ their feedback is that they could benefit from:

- **Greater consistency of conceptual approach and coalescence around a set of top-priority analytical questions regarding future climate risks.** It is helpful that many supervisors have converged on use of the NGFS Reference Scenarios to a large degree. Regulators could pay greater consideration to the depth of resources required by banks when responding to bespoke CSA requests. More coordinated approaches –both in analytical scope and practical aspects like timings– between supervisory exercises would promote efficiency, particularly for international banks.
- **Supervisory CSA exercises should focus on building a deeper understanding of the firm-specific and sectoral risks and vulnerabilities that may exist.** This is likely to lead to more productive conversations and actions coming out of supervisory exercises.
- **A common understanding across jurisdictions of the role and limitations** of forward-looking assessment in the context of the prudential supervisory and regulatory framework.
- **Thoughtful consideration of cost-benefit.** Supervisory exercises are extremely resource-intensive and it is important that supervisors are clear on the incremental benefit of an exercise for both the supervisor and participating banks as compared to the supervisory and bank resources required for these exercises.

¹⁷ FSB-NGFS, "[Climate Scenario Analysis by Jurisdictions: Initial findings and lessons](#)," November 2022. A 2022 survey of authorities globally reported that 35 exercises had been completed, 19 exercises were in progress, and 12 exercises were in the planning stage at the time. There have been several further exercises commenced or completed since 2022.

- **Appropriate and carefully chosen frequency of CSA exercises.** Exercise phasing is important to ensure that banks can plan and allocate resources efficiently, particularly for large scale supervisory exercises. It is also important that sufficient time is provided between exercises so that participating institutions are able to reflect and learn from them.
- **More standardized presentation of results,** as the choice of output variables and charts which are included in results publications can differ significantly.¹⁸
- **Greater supervisory coordination** around CSA exercises in general would alleviate the burden and resource intensity for internationally active banks required to complete multiple CSA exercises, including by allowing for the exchange of information between authorities and reducing duplication of requests. The BCBS could support national authorities and supervisory colleges by gathering information about planned supervisory exercises
- **Sharing the tools and datasets developed by supervisors for top-down supervisory exercises with the banking industry** to reduce some of the investment overheads, particularly for smaller banks.

CSA exercises involve a higher degree of uncertainty compared to traditional stress testing. Results of bottom-up supervisory exercises (where banks are required to run CSA models themselves) may be significantly different across participating institutions based on their assumptions and modelling methodologies. One option to address this in bottom-up supervisory CSA exercises may be to increase the transparency and standardization of supervisory exercises with a focus on clarity of instructions and guidance, but without suppressing the bank's idiosyncratic characteristics which are relevant to the exercise. Alternatively, a supervisory exercise may be more useful with a top-down approach with centrally-run scenarios using only data inputs from members.

IIF and ISDA members would encourage the BCBS, and jurisdictional central banks and supervisors, to engage actively and transparently towards a common understanding and more coordinated approach to supervisory CSA exercises as well as supervisory engagement with banks' own exercises. Providing consistent guidelines for supervisors across the world could enhance the effectiveness, efficiency, and comparability of supervisory exercises.

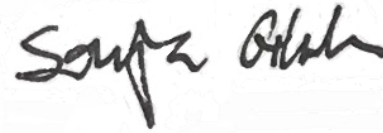
Thank you for your consideration of these comments. On behalf of the IIF and ISDA memberships, we hope that these global industry perspectives will contribute constructively to your efforts. We would be happy to further discuss our comments; we invite you to contact Andres Portilla (aportilla@iif.com), Sonja Gibbs (sgibbs@iif.com), Panayiotis Dionysopoulos (pdionysopoulos@isda.org) and Gregg Jones (GJones@isda.org) should you have questions or comments.

Yours Sincerely,

¹⁸ In a 2022 analysis, the IIF found that supervisors in different jurisdictions had employed at least six unique measures of credit risk impact alone. See IIF, "[Integrity through Alignment: A 2022 Roadmap for Global Standards and Market-led Approaches in Sustainable Finance](#)," February 2022.



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