

Global Financial Markets Association

Response to the Basel Committee for Banking Supervision Discussion Paper on the role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks

The Global Financial Markets Association (GFMA) welcomes the opportunity to respond to the BCBS discussion paper on the role of climate scenario analysis (CSA).

About GFMA

The GFMA represents the common interests of the world's leading financial and capital market participants, to provide a collective voice on matters that support global capital markets. We advocate on policies to address risks that have no borders, regional market developments that impact global capital markets, and policies that promote efficient cross-border capital flows to end-users by efficiently connecting savers and borrowers, benefiting broader global economic growth.

The GFMA brings together three of the world's leading capital markets trade associations to provide a forum for the largest globally active financial and capital market participants to develop standards to improve the coherence and interaction of cross-border financial regulation. We aim to improve the functioning of global capital markets to support global economic growth and to support lending and to serve clients in those jurisdictions they want to do business.

The Association for Financial Markets in Europe (AFME) in London, Brussels and Frankfurt, the Asia Securities Industry & Financial Markets Association (ASIFMA) in Hong Kong and Singapore, and the Securities Industry and Financial Markets Association (SIFMA) in New York and Washington are, respectively, the European, Asian and North American members of GFMA.

Key issues and general comments

We have responded to the consultation questions below, but in addition to our responses to the specific questions we also have the following overarching comments.

The BCBS Principles for the effective management and supervision of climate-related financial risks (2022 Principles)¹ acknowledge that the field of scenario analysis is highly dynamic and that practices are expected to evolve rapidly as climate science advances. This continues to be the case, and while we support the Committee's aim of promoting a common understanding of supervisory expectations and harmonizing strong practices, it is vital that this does not come at the cost of flexibility in adapting to changing climate science and increased availability of detailed and reliable data on climate-related financial risks.

Uncertainty surrounding the outputs of CSA makes it challenging to incorporate into risk management decisions. While CSA exercises are helpful to understand financial risk transmission channels in a specific scenario, climate scenarios are not forecasts of expected climate-related physical impacts and are not forecasts of government and consumer behavior. There is a high degree of uncertainty around the timing and magnitude of climate-related physical risk events and the resulting political, social, and economic reactions to these events. Those uncertainties can generate considerable variation in estimates

¹ <https://www.bis.org/bcbs/publ/d532.pdf>



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15 July 2024

of expected impacts, which complicates the use of results in risk management decision -making (e.g., with respect to the use of some common risk management tools).

CSA additionally faces broader challenges with data and modeling in estimating climate-related financial risks. CSA is in its early stages and is currently primarily an exploratory tool. Further, climate-related financial risks are highly uncertain and challenging to measure. These challenges also vary between lines of business and regions.

While CSA exercises carried out by central banks globally have confirmed limited materiality of climate-related financial risk as it relates to first-order impacts, more work is required to assess the materiality of second order impacts that could drive or exacerbate macroeconomic weakness, and how these climate-driven impacts could flow through to the broader financial system.

In light of this, supervisors need to exercise caution in using CSA as a decision-making tool.

Standardization should not come at the cost of flexibility and the ability to customize for individual banks. We agree strongly with the point raised in the discussion paper that while standardization may improve comparability of bank results for regulators and supervisors, it will also make it more difficult for banks to take idiosyncratic risks into account. Increased standardization also has the potential to restrict innovations in CSA design and approaches.

Further, it is critical that standardization not render a CSA exercise disproportionate to the materiality of the risk to the institution and its capabilities. We agree with the discussion paper's inclusion of proportionality as a key feature of CSA. However, in theory, a higher degree of standardization applied to a CSA exercise may risk design choices that result in a CSA exercise of disproportionate depth and granularity for a given institution.

The discussion paper comments on the differences between "bottom-up" (i.e., bank-led) CSA exercises and "top-down" (i.e., supervisor-led) CSA exercises. If the BCBS intends to develop further principles following this discussion paper, it may be helpful for those principles to distinguish between different types of CSA exercises. For example, supervisor-led CSA exercises may be expected to be more standardized than bank-led CSA exercises, to enable supervisors to develop a clear understanding of climate-related financial risks across the sector that they supervise, while bank-led CSA exercises should be more customized in order to focus on idiosyncratic risks to the individual banks.

In any event, any future guidance regarding CSA should be principles-based and proportionate, and should continue to be developed following further consultation with the industry. It is important that banks have sufficient flexibility to determine which approaches are fit for purpose, particularly in the context of continuing developments in climate science and evolving practices around identifying and quantifying climate-related financial risks. Any future guidance should also be kept under regular review, given the evolving nature of this area.

Current objectives in the Basel Framework

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?

We agree with the key prudential objectives identified by the Committee. We comment further below on how the role of CSA varies based on each of these objectives:



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Risk identification

We agree with the roles that CSA may play in the risk identification process, as identified in the discussion paper (i.e., that CSA may help identify specific exposures that are vulnerable to certain climate risk drivers, as well as portfolio level exposures and potentially correlated groups of exposures. CSA may also help to identify risk concentrations).

Where the discussion paper refers to "transition risk" and "physical risk", we understand that these are references to transition risks and physical risks that drive financial risk, in line with the 2022 Principles which describe climate risk as a driver of traditional financial risks (and not as a standalone type of financial risk).

Risk management process

We agree that CSA exercises may be useful in a range of risk management processes. However, it is important that any future guidance is clear on the limitations of CSA.

CSA exercises are helpful to understand how a specific climate scenario could translate into financial risk exposure given a specific set of variables. However, climate scenarios are not forecasts and should not be used as such. While climate scenario analysis may provide 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 variables used in the scenario. For example, a bank may use the NGFS DNZ scenario to understand the likely impacts of a carbon tax on wholesale credit risk exposure in a carbon-intensive sector, but this does not provide insight into the actual likelihood that a government will impose a sudden carbon tax that materially impairs the financial position of a key sector on which that jurisdiction's economy depends.

The degree of uncertainty around the timing and magnitude of climate related risks is high. Further, exposures subject to physical risks do not directly equate to risk of financial loss. The financial impact will result from how people react, not from the occurrence of the event in and of itself, but how these reactions will play out is highly uncertain as well. Those uncertainties can generate considerable variation in estimates of expected impacts, which complicates use of some common risk management tools as well as strategic decision-making on the basis of CSA.

The Federal Reserve Board's recently published summary of its pilot CSA exercise² highlighted this challenge, 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.

Further, references to the use of CSA in "determining exposures or risk limits" may be interpreted as suggesting that banks should adopt lending limits specifically related to climate-related financial risk. In line with existing risk identification processes, banks already take into account impacts of material climate-related financial risks on the overall risk appetite of the firm, where appropriate. Mandating the creation of new lending limits specific to climate-related financial risk would be inconsistent with the regulatory expectation that banks' risk management framework include all material risk considerations to

² <https://www.federalreserve.gov/publications/files/csa-exercise-summary-20240509.pdf>

the bank. 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 a disproportionate focus on climate-related risks within a bank's broader risk appetite framework.

Similarly, a bank's risk management processes should focus primarily on material risks over the short to medium term and should not go beyond the duration of banks' portfolios.

It is also unclear what the BCBS intended by references to the use of CSA in "pricing exposures." Any future expectations regarding this would require additional explanation and consideration.

Internal and supervisory capital and liquidity assessments

Climate risk drivers should be approached in the same manner as other financial risk drivers when institutions run their ICAAP and ILAAP processes, with only those assessed as material incorporated into the assessment. This approach is in line with regulatory expectations and also in line with the guidance on CSA in the 2022 Principles.

The time horizons analyzed within capital and liquidity assessment process (e.g., ICAAP and ILAAP) are typically 3-5 years, while climate-related risk drivers can cause risks to materialize over multiple timeframes. Some risk factors may materialize sooner (for example, higher incidences of severe weather-related events and associated physical risks such as flooding), while others are likely to unfold in the coming years, and some could be much more significant – under some scenarios – in future decades. There are significant conceptual issues with calibrating capital requirements – which are intended to be a cushion against unexpected losses that could occur in the near-term – for risks that could materialize in 10, 20 or even 50 years. We recognize that, where the forecasting horizon of ICAAP and time horizon for the materialization of climate risks converge - and the relevant gaps in knowledge, data and modelling are closed - CSA could play a useful role in informing capital and liquidity adequacy assessments. However, capital and liquidity assessments (whether these reflect climate-related risks or more traditional risks) should continue to remain short to medium term and should not go beyond the duration of banks' portfolios.

In the meantime, supervisory climate scenario analyses and stress tests completed to date suggest that the impacts of climate-related risks on financial stability and institution safety and soundness are likely to be generally moderate and manageable over the short- to medium-term, with the potential for more significant risks arising over the longer term under different scenarios³. The results of CSA and climate stress testing exercises appear to indicate that financial institutions would be able to absorb climate-related risks with current capital levels and these exercises do not currently indicate levels of risk over the near to medium-term which would justify the use of the capital framework.

³ As discussed elsewhere in this response, we acknowledge that CSA is in its early stages and is primarily an exploratory tool at the moment. This was recently discussed by the Federal Reserve Board in its summary of its 2023 pilot CSA exercise, which highlighted, among other things, the data and modeling challenges faced by participating firms. <https://www.federalreserve.gov/publications/files/csa-exercise-summary-20240509.pdf>



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15 July 2024

While near-term climate stress testing could conceptually serve as an input to capital and liquidity adequacy assessment (and has done so to an extent in Europe, following the ECB's climate risk stress test in 2022), we believe it would currently not be appropriate to require this, as in many jurisdictions the foundations are not in place with respect to knowledge, data and modelling. For example, following its 2021 Climate Biennial Exploratory Scenario, the Bank of England published feedback⁴ stating that projections of climate losses are uncertain, and scenario analysis is still in its infancy with several notable data gaps (although they did also comment that the Scenario had already helped drive improvements in these areas).

As recognized by the BCBS in its 2021 report on measurement methodologies for climate-related financial risks, caution is required when using climate stress testing to assess resilience, and several key conditions would need to be met before climate stress tests could be informative to quantitative capital planning, including maturation of data and tools, improvements in knowledge of financial risk transmission channels, and inclusion of risks that could plausibly crystallize in the near-term. Similarly, data quality and model validation approaches constitute obstacles to considering climate stress tests in an ICAAP/ILAAP or broader Pillar 2 context.

Assessment of business model resilience and business strategy building

It is important to be clear that climate scenarios are not forecasts and that banks are not and should not be expected to use climate scenario analysis to set business strategy.

The discussion paper appears to suggest that banks should use CSA to assess the “resilience” of a bank’s decarbonization targets and net zero transition plan (i.e., a bank’s business strategy with respect to transition). The discussion paper also suggests that “the outcomes of climate scenario analysis can be inputs to inform banks’ strategies” and that “long-term scenarios can be employed to study the potential effects on banks’ profitability and the growth prospects of economic structural changes.”

Longer-term climate scenarios are not forecasts that can be used to predict impacts on a bank’s profitability over time. Climate scenarios are scenarios that can be used to understand financial risk transmission channels. Longer-term climate scenarios are also much longer-dated than banks’ strategic planning time horizons.

Further, it is important that the alignment pathways used for target-setting and transition planning are not conflated with the stress scenarios that banks are using for climate scenario analysis. Banks are using alignment pathways (e.g., IEA NZE) to align their portfolios with a target end state, not to assess the resilience of the bank’s strategy and business model.

Moreover, banks are not setting their decarbonization strategies (e.g., portfolio decarbonization targets) in a vacuum that is disconnected from the state of the real economy. A bank’s financed emissions are the emissions of the clients that it finances. While a bank can support its real economy clients in pursuing decarbonization strategies, a bank’s ability to decarbonize its financing portfolios is fundamentally dependent on the pace of its clients’ transitions. The pace of real economy transition will depend on whether the economic conditions and incentives are in place for transition to be commercially viable—e.g., government policy, clean energy infrastructure, technological development, consumer demand, etc.

⁴ <https://www.bankofengland.co.uk/stress-testing/2022/results-of-the-2021-climate-biennial-exploratory-scenario>

To effectively support the real economy throughout the transition, banks must keep pace with the real economy transition, not front run it. Supervisory expectations on banks to front run the pace of the real economy transition could create significant risk both for the financial system and the economy more broadly, and may also constrain banks' business strategy.

In conclusion, the BCBS should avoid framing use of CSA to drive banks' business strategy in a way that could potentially constrain firms' business models and strategic planning and create risk to banks and the financial system. 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.

Constraints for the application of scenario analysis and stress testing

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

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 exercises carried out by central banks globally have confirmed limited materiality of climate-related financial risk as it relates to first-order impacts. More consideration is needed by central banks regarding second order impacts that could drive or exacerbate macroeconomic weakness, and how these climate-driven impacts could flow through to the broader financial system.

Further work is also required to develop the credible, coherent scenarios used to carry out CSA exercises. Overall, current scenario design is too blunt to capture the idiosyncratic nature of the first- and second-order risks involved. More work could be conducted on best practices in the market, including assumptions related to correlation, liquidity, and valuation impacts.

The lack of short/medium term plausible scenarios of diverse severities constitutes a challenge. Such scenarios would contribute to all four prudential objectives. For long-term scenarios, already updated by NGFS, the level of information on transmission channel projections is often insufficient. This can lead to disparate approaches among banks and supervisors, which may contribute to lack of comparability.

In addition to the lack of short/medium term plausible scenarios, there is a lack of coherence between short and medium term scenarios with the long term scenarios. As a result, where sufficient information is not available, institutions do their best to complete the scenarios but different institutions fill the data gaps in different ways, reducing comparability. It is also necessary to develop a more granular breakdown by relevant sector. Without this, each entity will make its best effort to categorise by sector, but differing approaches may also reduce comparability.

The Bank of England's April 2024 Quarterly Bulletin included an article⁵ exploring how financial institutions can use scenario analysis to quantify climate change risks, which comments on some of the limitations of CSA, including:

- Climate scenarios do not capture the full suite of potential climate risks. This limitation is being addressed as scenarios are refined over time to incorporate a broader range of climate risks.

⁵ <https://www.bankofengland.co.uk/quarterly-bulletin/2024/2024/measuring-climate-related-financial-risks-using-scenario-analysis>

- Calibration of estimated chronic damages from temperature risks remains an area of ongoing research, meaning that CSA may underestimate the impacts of severe climate change.
- Scenarios do not account for the effects of 'tipping points' which can significantly increase the effects of climate change.

Regulators should also apply greater scrutiny to the long-term scenarios that have been developed by the research institutes:

1. Ideally every projected variable should have a corresponding historic source (or an equivalent baseline) which was used as a starting point.
2. Projections should be checked for plausibility. For example, severe negative price curves were subsequently confirmed by NGFS to be done erroneously.
3. NGFS should ideally publish comprehensive model documentation of the integrated assessment models and relationships should not just be subject to interpretation but clearly described (and in particular, how the scenario assumptions are set up in the individual models, to enable banks to reproduce them using the same models).
4. Scenario assumptions should not be described at a high-level but be detailed to avoid double counting when using, for example, Current Policies scenario (which climate mitigation policies are included in the scenario).
5. It should be clear what the objective of the scenario is.

Further, transition risk narratives should not just reflect an accelerated path to net zero but also explore the risks of stranded assets in the renewable sector (outdated vs state-of-the-art transition technologies), higher credit risk in the EV manufacturing sector etc. Acute physical risk should ideally be derived from tail risk outcomes using the current climate conditions, looking at the resilience of the financial system today, which can then provide insight into how the increased frequency/severity of tail events may impact the financial system in the future. Assessing the current resilience of the financial system to the tail events which can occur under current climate conditions will help size the severity of the impacts, even if the likelihood may change in the future. Similarly, the risk associated with outcomes that develop over a period of time should not be assessed at a single point in time but should reflect a shift in current perceptions of future climate states, recognizing that financial impact does not necessarily align with when a change manifests.

In addition to the fact that both the underlying climate science and the scenarios continue to develop, we are concerned that there are still significant quality problems with the data necessary to carry out CSA exercises, including with the information that banks receive from customers, which is not yet sufficiently standardized, giving rise to differences in terms of impacts. The lack of raw data leads to the use of estimates at the level of each relevant sector/client/geography/etc, which results in banks facing at times very high levels of uncertainty within their figures for certain metrics. Guidelines on how to fill data gaps (while waiting for information flows to become more organized) could limit divergence in banking and supervisory hypothesis management. Collective data infrastructure could also speed up the closure of the data gap issue.

The key challenges relate to:

- As noted above, climate scenarios are not forecasts of what is expected to happen, and there is a high degree of uncertainty around the timing and magnitude of climate-related risks which can

generate considerable variation in estimates of expected impacts. These uncertainties make it very challenging to use CSA in risk management decision-making.

- The lack of availability of high quality and regularly updated data, leading to low data quality. For example, even in jurisdictions where climate-related disclosure obligations are starting to be implemented, there is no requirement for corporates to disclose impacts under different specific scenarios.
- The timeliness of the data received by banks. For example, in the case of certain emissions data, this will not become available until 15 months after the relevant year end. Banks need a further 3 – 6 months to consolidate this information and check it, at which point the data is almost 2 years old.
- Lack of homogeneous data.
- The limited guidance to date on assessing value chain related impacts.
- The lack of availability of scenarios that are granular enough to be applied to a range of different jurisdictions (e.g., Latin America, US, EU etc).
- The difficulty in developing consistent scenarios (when it is not possible to conduct a CSA based on only one scenario).

Key features of CSA

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 discussion paper raises important aspects of how firms can implement existing scenario analysis and stress testing frameworks, and the associated challenges.

However, there are a number of significant challenges with these key features, including:

- It requires a lot of in-house expertise to develop these scenarios under these criteria. Even larger entities would see this as a great challenge, not to mention smaller institutions. More standardized scenarios would help to alleviate some of the challenges (although as discussed elsewhere, we agree with the BCBS's comments about the trade-offs between comparability and the ability for banks to account for idiosyncratic risks).
- The reference to historical data. As recognized in the BCBS discussion paper, the past is not necessarily a good basis for predicting the future when it comes to climate change and transition.

Usage-specific considerations for CSA

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.

As mentioned above, we generally agree with the usage-specific considerations set out in the discussion paper. In line with our comments elsewhere in this response regarding the design of CSA exercises, we have the following comments:

- **Materiality:** Regardless of the objective of a CSA exercise, it should focus on financial risks that are material to the institution (although the definition of materiality may differ depending on the objective of the CSA exercise and the assumptions that underpin the exercise).
- **Standardization:** Different degrees of standardization may be appropriate for any of the objectives identified by the BCBS, depending on whether the aim is to identify risks specific to individual banks or to identify cross-cutting risks impacting a broader group of banks. While standardization may improve comparability of bank results for regulators and supervisors, it will also make it more difficult for banks to take idiosyncratic risks into account. Increased standardization also has the potential to restrict innovations in CSA design and approaches⁶.
- **Time horizon:** As discussed above in our response to Question 1, where the objective is to ensure that the bank's internal capital and liquidity assessments appropriately reflect climate-related financial risks, climate risk drivers should be approached in the same manner as other financial risk drivers when institutions run their ICAAP and ILAAP processes, focusing on climate risk factors that are material on a short / medium-term horizon.
- **Baseline selection:** As a general comment, it is difficult to establish a baseline in the context of long-term scenario planning. When considering the longer-term risks, it is not clear what outcomes are the most likely (or the alternatives).
- **Granularity:** As discussed above, it is also necessary to develop a more granular breakdown by relevant sector. Without this, each entity will make its best effort to categorise by sector, but differing approaches may also reduce comparability.
- **Balance sheet assumptions:** Any future guidance on CSA exercises should also clarify the balance sheet assumptions that should be used. For example, the BCBS discussion paper refers to static balance sheet in the short term and dynamic balance sheet in the long term as valid options. However, in practice some supervisors carry out CSA exercises requiring dynamic balance sheet irrespective of the time horizon. Moreover, it is extremely difficult to define the evolution for certain sectors that are currently transitioning or are expected to transition in the medium or long term. The evolution of transition may rely on public policies and developments by governments, which may occur at different speeds in different jurisdictions.

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

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

Scenario design is highly demanding and requires significant resources both in terms of in-house expertise (e.g., in developing detailed scenarios) and in terms of costs (e.g., where institutions need to use external resources), and most banks leverage or benchmark against scientifically based anchor scenarios for their CSA. However, banks need to expand these scenarios - notably in terms of sectoral or geographical dimensions - to be able to run them. Some banks use scenario builders for this, while others have internalized these capacities.

⁶ The need to take these tradeoffs into account was noted in the Federal Reserve's feedback on its 2023 pilot CSA exercise <https://www.federalreserve.gov/publications/files/csa-exercise-summary-20240509.pdf>

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

The following features and measures would enhance the utility of currently available scenarios:

- **Multiple time horizons:** Having several time horizons, in particular a 3 to 5-year horizon, is the most needed feature to feed the ICAAP/ILAAP and risk management objectives.
- **Sectoral and geographical features:** Adding further details on sectoral and geographical dimensions will limit the need for internal modelling to expand scenarios. In particular:
 - Geographical scenarios are almost non-existent. Granular data at the country level would help enhance the utility of currently available scenarios by incorporating country specific nuances.
 - Scenarios could include the modelled impact of physical and transition-related climate risk events on key concepts that are important for bank portfolios. Beyond GDP this would include the impact on at least property prices via various channels (for example, demand-supply gap due damage to physical infrastructure, labour market shocks and economic slowdown) unemployment rate, inflation, interest rates and more commodities (in addition to oil prices).

More information on developments in the energy mix, corporate and public capital expenditure and anticipation of technological innovation will also improve the usability of anchor scenarios.

In addition, as flagged in previous questions, it is essential to make clear what the objective of the scenario is.

Inclusion of additional hazard types (for example, weather-related shocks) would also help banks and other financial institutions better comprehend the risk exposure and quantify its impact on client portfolios. This will also help financial institutions design targeted bespoke scenarios, relevant to specific exposure (in terms of geography and hazards), and better assess the impact on their portfolio. However, additional hazards should only be incorporated once the underlying methodology has been further developed and refined in relation to the hazard types that are currently included.

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

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

We agree strongly that while standardization may improve comparability of bank results for regulators and supervisors, it will also make it more difficult for banks to take idiosyncratic risks into account. Increased standardization also has the potential to restrict innovations in CSA design and approaches.

In any event it is critical that standardization not render a CSA exercise disproportionate to the materiality of the risk to the institution and its capabilities. We agree with the discussion paper's inclusion of proportionality as a key feature of CSA. However, in theory, a higher degree of standardization applied to a CSA exercise may risk design choices that result in a CSA exercise of disproportionate depth and granularity for a given institution.



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15 July 2024

The discussion paper comments on the differences between "bottom-up" (i.e., bank-led) CSA exercises and "top-down" (i.e., supervisor-led) CSA exercises. If the BCBS intends to develop further principles following this discussion paper, it may be helpful for those principles to distinguish between different types of CSA exercises. For example, supervisor-led CSA exercises may be expected to be more standardized than bank-led CSA exercises, in order to enable supervisors to develop a clear understanding of climate-related financial risks across the sector that they supervise, while bank-led CSA exercises should be more customized in order to focus on idiosyncratic risks to the individual banks.

Any future guidance on supervisor-led CSA should foster standardized methodologies for estimates and proxies, so as to ensure consistency among banks and improve comparability.

Yours faithfully

A handwritten signature in black ink, appearing to read "Allison Paas".

Executive Director

Global Financial Markets Association