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Response to the BCBS Discussion Paper | The role of climate scenario analysis in strengthening the management and supervision of climate-related financial risks

Brussels, 12 July 2024

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?

Finance Watch welcomes the recognition that "Typical supervisory tools may not reflect potential losses that may arise from climate-related risks, as historical data on loss patterns have limited predictive capacity for future losses arising from structural changes in the economy and as climate-related risks are expected to materialise more frequently over varying time horizons".

In this context, climate scenario analyses (CSA) hold the potential to become a source of forward-looking information. Yet, when considering CSA as a tool to facilitate the assessment of climate-related financial risks, it is important to be aware of the existing capacities and limitations of CSA to make sure their results are not misinterpreted leading to potentially flawed conclusions on the risk mitigating actions. The currently available climate scenarios, and correspondingly CSA, all feature major limitations and flaws in the underlying economic models, as has been highlighted in numerous (academic) reports and recognised by the NGFS who are at the forefront of CSA development.

We refer to the following publications on the topic:

Finance Watch report "Finance in the Hot House world"
Carbon Tracker report "Rolling the Dice against Pensions"
Universities Superannuation Scheme and University of Exeter Report "No time to lose"
Institute and Faculty of Actuaries report "Climate Scorpion - the Sting is in the Tail"
NGFS explanatory note "NGFS Scenations: Purpose, use cases and guidance on where institutional adaptations are required"

As NGFS stated in its explanatory note (referenced above), " Aware of these potentially missing impacts in the results, one should not consider the NGFS scenarios as a suitable standalone instrument for a cost-benefit analysis on the opportunity of climate action".

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CSA can only offer a partial view on the risk vulnerabilities of a bank (also limited to the vulnerabilities to climate risk drivers/climate-related events which are captured in the current scenarios) and exploratory insights into risk quantification and, correspondingly, capital assessment. Therefore, CSA are likely to be most useful for risk identification and high-level assessment of business model resilience and strategy building. However, the objectives of risk quantification, internal and supervisory capital and liquidity assessments are not likely to be achieved at present stage of scenario development. Whilst CSA may offer additional insights for the climate-related risk management process, they cannot be viewed as a main tool for the processes listed in the DP such as "evaluating potential losses under a range of severe but plausible climate scenarios, pricing exposures, determining exposure or risk limits".

Therefore, we urge the BCBS to clearly recognise that due to the exploratory nature of the CSA, the existing limitations of the exercises, banks and prudential supervisors cannot and should not rely on CSA for risk mitigation and prudential action/policy choices.

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?

In order to make CSA realistic and decision-useful, the assessments of the economic consequences of climate change in the scenarios needs to be realistic. The most notable improvements, which are needed, include:

- Ensure realistic scenarios are used
- Ensure that economic models account for the specificities of climate change, including its magnitude and irreversibility
- Ensure that the conclusions of economic models are compatible with the conclusions of climate science, including by rejecting the use of quadratic-only damage functions in loss assessments
- Conduct unbiased and rigorous analyses of the results
- Conduct sanity checks between the results of CSA and climate science

We refer to the Finance Watch report "Finance in the Hot House world" for a more detailed discussion.

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

We conceptually agree with the importance of the identified key features of CSA. Yet, we emphasise the importance of differentiating between the desired target state and the current practice of CSA. In particular, we stress the importance of recognising the limits of the existing

CSA, which do not yet have some of the identified key features, as thus, cannot satisfy all of the objectives identified in Chapter 1 of the DP. In particular, we refer to our response to Q1 regarding the motivation/intended objectives of CSA.

We further would like to specifically comment on the following key features:

Plausibility: This criterion is not yet fulfilled in all commonly-used climate scenarios, as they i) are based on unadapted economic models (specifically quadratic damage function, which is unable to capture the specificities, the severity and the magnitude of climate-related developments), ii) do not take into account some of the most significant physical impacts such as sea level rise and forest fires, climate tipping points and societal impacts resulting from climate change. On the transition risk part, none of the CSA conducted has been able to reflect the scale of losses related to asset stranding, most notably in the fossil fuel sector, which is clearly at odds with all scientifically grounded net zero climate scenarios.

Transparency: The principle of transparency is fundamental, given the complexity of CSA, which makes them less accessible to interpretation, in particular by policymakers who are in most cases not experts and yet responsible for adopting regulations/legislation based on the conclusions of the supervisory work.

Proportionality: The caveat of making CSA proportionate to the materiality of the risk (which is generally a reasonable and commonly accepted practice in risk management) is that the establishment of materiality might itself rely on scenario analyses (which seems to be a frequent practice among financial institutions at the moment). This might lead to a situation of risk underestimation where the existing limitations of climate scenarios will prevent identification of some potentially material riks, which will then in turn, will not be properly accounted for in the CSA as risk assessment.

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.

Standardisation

Standardisation of the CSA is essential for the supervisory analyses to ensure comparability of results. A degree of standardisation, with possibilities to customise certain institution-specific elements, is also essential when establishing supervisory guidance for banks' internal risk management (which also covers internal scenario analyses and stress testing) in order for supervisors to benchmark the approaches of the supervised entities, interpret the conclusions and be able to determine supervisory actions in a consistent manner.

We understand that such standardisation is not a common practice in the existing institution internal stress testing approaches, yet significant uncertainties associated with identifying and assessing climate risk give rise to concerns about (intentional or unintentional) downplaying the risk so that more supervisory guidance is required - at least at the current stage of development of climate risk management and supervisory tools.

Time horizons

Focusing on short-term time horizons will i) lead to underestimating the physical risks as the most severe impacts of climate change are likely to occur beyond the average time horizon of banks' financial planning and internal capital adequacy assessments; and ii) will not allow to get a comprehensive/true view on the transition risks, as transition is a gradual process where actions taken today influence the risk in the future. For instance, the IAIS clearly recognised this in their *Climate Risk Consultation Package 3 - Proposed supporting material to reflect climate risk (page 19).* The IAIS stated that climate risks are "[d]ependent on short-term actions: The ultimate impact of climate change depends in large part on the nature and extent of the actions taken in the near-term by governments, corporations, individuals and communities around the world to fight climate change".

Thus, if time horizons for CSA "reflect the maturity and nature of exposures", as suggested in the DP, CSA will overlook carbon lock-ins, which will lead to increased physical risk and risk of disorderly transition in the future (cliff effects).

Severity of scenarios

The severity, as well as the plausibility of scenarios given the actual predictions of climate science, hinges crucially on their technical developments and the underlying economic models used to predict the effects of climate change. As mentioned in our response to Q1, all climate scenarios currently severely underestimate the economic impacts of climate change and do not allow to capture some of the most complex and key elements, outlined in the DP, such as interactions and correlations across risk drivers, compounding effects, feedback loops and events associated with crossing climate tipping points. Therefore, they remain very limited in their ability to deliver true risk quantification and conclusions for the capital adequacy assessment.

Baseline selection

We agree with the considerations expressed in the DP: A baseline scenario without climate change-related risks is counterfactual to the actual developments and climate science; whereas selecting a baseline scenario with a certain level of stress will downplay the outcomes of a stress scenario. However, the latter statement is only true if the same baseline scenario (i.e. scenario with a stress level corresponding to the observed developments) is not used for the

baseline financial planning and risk management (including loss provisioning and capital assessment).

Given the predictions of the climate scientists and the observed climate action/policies across the world, the baseline scenario should be chosen realistically, i.e. **a scenario with no climate-related losses cannot be considered a baseline.** For instance, in their technical documentation to the latest edition of climate scenarios, the NGFS recommended using the "fragmented world" scenario as a baseline. In order to ensure coherence of the climate-related risk management practices, the same baseline scenario should be also used for financial forecasting and risk management, as mentioned above. This would likely lead to higher loss provisioning and climate risk estimates that are currently observed in financial institutions' practices.

Balance sheet assumptions

We broadly agree with the considerations expressed in the DP. However, we warn against exclusive use of the dynamic balance sheet assumptions for the reasons highlighted in the DP, in particular the risk of downplaying the future vulnerabilities, speculative nature of judgements about future balance sheet developments and constraints in implementing the intended adjustments at macroeconomic level (risk of herding behaviours and abrupt market corrections). Specifically, **a dynamic balance sheet approach tends to neglect the second round or the disruptive effects of balance sheet adjustments on the economy** whereas those effects are the most impactful from an economic standpoint.

Analytical frameworks

We strongly support the considerations of the DP. In particular, the fact that historical relationships and correlations will not hold in the future with accelerating climate change and arrival of tipping points, should be highlighted even more prominently. The text of the DP could additionally benefit from pointing out the methodological flaws of the current analytical approaches to analyse climate-related risks and the need for enhancements, as stated in our response to Q3.

Yet, Finance Watch strongly warns against waiting for the perfect approach before acting (actionability of CSA results). Whilst CSA results are not yet able to deliver precise risk measurements, the most fundamental conclusion from supervisory CSA is clear: Orderly and timely transition is a precondition for financial stability; the benefit of timely actions in terms of ensuring financial stability outweighs the cost of such policy actions.

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

In addition to the usage-specific considerations included in the DP, it is important to consider the driving forces/transmission variables used in the scenarios. Until now, carbon prices and the evolution of emissions are among the main "shock variables" in the climate scenarios. This does not allow to realistically model asset stranding risks associated with the changes in the energy sector required to achieve the Paris objectives, whereas scenarios based on climate science require a significant reduction in the use of fossil fuels, which should lead to major stranding risks in the fossil industry.

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

We refer to our response to Q3.

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

Two alternative approaches should be considered systematically:

- **Sensitivity analysis** using a "what if" logic based on climate science and in particular the IPCC work. This is the most effective way of making sure that the supervisory approach is compatible with climate science, something fundamental, and that supervisors adopt measures that will ensure financial stability in a world confronted with radically new and never seen conditions.

- **Reverse stress tests** can be a useful "fix" to partially overcome the limitations of the existing scenarios and underlying models to better understand climate-related vulnerabilities. Reverse stress tests were pointed out by the IAIS in their "Draft Application Paper on climate scenario analysis in the insurance sector". This view is also supported by the experts/actuaries, as highlighted in the paper by the Institute and Faculty of Actuaries (see our response to Q1). Akin to traditional financial scenario analyses and stress testing, reverse stress testing should be made a common risk management practice. Reverse stress testing should in particular include the impact of climate change on the economy (impact on GDP) and identify the breaking point of the financial system.

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

Supervisory exercises should be conducted along the following logic:

1. Use as a baseline a realistic assessment of the impact of climate change on the economy (see Q5 reg. baseline selection)
2. Use a sanity check logic to ensure the compatibility of the economic impact of climate change with climate science
3. Conduct a CSA based on steps 1 et 2 described above
4. Conduct a sensitivity analysis using a "what if" logic based on climate science
5. Conduct reverse stress tests and identify the breaking point of the financial system (what is the level of global warming that would lead to financial instability?).