Principles for the effective management and supervision of climate-related financial risks: Consultation response from 2° Investing Initiative

1. Introduction

2° Investing Initiative (**2DII**) is an independent, non-profit think tank working to align financial markets and regulations with the Paris Agreement goals. Globally focused with offices in Paris, New York, Berlin, London and Brussels, 2DII coordinates some of the world's largest research projects on sustainable finance. Its team of finance, climate, and risk experts develop research, tools, and policy insights to help financial institutions and regulators hasten and adapt to the energy transition.

2DII has been represented at the EC High Level Expert Group on Sustainable Finance, helped design Article 173 of the Energy Transition Law in France, and collaborates with financial supervisors in Europe and abroad on the application of climate scenario analysis on investment and lending portfolios. 2DII has developed and implemented with banks, investors and financial supervisors the first portfolio alignment measurement methodology and tool PACTA (the Paris Agreement Capital Transition Assessment), the core elements of which are now reflected in ISO 14097.

In November 2021, the Basel Committee on Banking Supervision released a consultative document (the **Consultation**) seeking views on 18 high-level principles for the effective management and supervision of climate-related financial risks. Principles 1 through 12 provide banks with guidance on effective management of climate-related financial risks, while principles 13 through 18 provide guidance for prudential supervisors.

2DII welcomes the proposed principles in many respects as they can be an important step in mainstreaming climate risk analysis in banks across the globe. This document provides 2DII's general comments in relation to the Consultation together with responses to specific questions included in the Consultation. These comments and responses draw from both the PACTA and 1in1000 research programmes from 2DII and while they focus mostly on transition risks, they can also apply to other types of climate related risks and long-term risks more generally.

Please do not hesitate to contact David Cooke, Law and Policy Lead (david@2degrees-investing.org) or Nicholas Dodd (nicholas@2degrees-investing.org) for further information on anything contained in this response or to find out more about these research programmes.

2. General comments

Climate change requires a new risk management paradigm

The long-term, widespread and systemic risks posed by climate change require a new approach to banking supervision and assessment of the materiality of these risks to the financial sector. The financial crisis brought about an ex-post response through the development of new prudential rules, but we now need new ex-ante approach for the risks posed by climate change. Such an approach must internalise a forward-looking assessment of the capacity of the financial and economic system to transition on a systemic and global scale to mitigate the risks posed by climate change.

There is widespread consensus that a delayed or disorderly transition is likely to pose systemic risks to the financial sustainability of the banking sector. These systemic risks will be felt not only through banks' exposure to climate relevant sectors but throughout all banks' activities and will manifest over long-term time horizons. Managing these long-term risks from climate change requires mitigating these risks which in turn requires actions which contribute towards climate change mitigation in the real world. We consider that, for banks and

supervisors alike, managing the long-term risks from climate change means starting to action climate change mitigation in the real economy in the short-term.

As the Consultation notes, a review of the existing Basel Framework concluded that the *Core principles for effective banking supervision* (**BCPs**) and the supervisory review process (**SRP**) are sufficiently broad and flexible to accommodate additional supervisory responses to climate-related financial risks. The following general comments articulate how the three pillars of the Basel Framework can be adapted ex-ante to account for climate-related financial risks and inform the proposed *Principles for the effective management and supervision of climate-related financial risks*:

Long-term risk management at the individual bank and supervisory level

We fully support the idea that banks should make use of scenario analysis, including stress testing, to assess the resilience of business models and strategies to a range of plausible climate-related pathways and determine the impact of climate-related risk drivers on their overall risk profile (Principle 12) and supervisors should consider using climate-related risk scenario analysis, including stress testing, to identify relevant risk factors, size portfolio exposures, identify data gaps and inform the adequacy of risk management approaches (Principle 18).

Likewise, we could not agree more that it is also paramount to include longer time horizons in climate risk analyses. While we are glad to see these references, further clarifications are required in relation to what should be considered an appropriate timeframe. Fundamentally, the risks related to climate change and policy shocks from interventions to put economies on course for transition are going to play out over a longer period (in most cases over many decades). This points to an appropriate timeframe for stress tests and transition disruption tools being 10-15 years.

Recent consultations have begun to acknowledge the importance of approaching climate related risk with a long-term perspective that goes beyond the length of the business cycle. Such points have been raised in climate stress tests over the last years (recently in the ECB 2022 climate stress test), in EIOPA's 2021 consultation on the application guidance of the ORSA, the OCC's current consultation on Principles for Climate-Related Financial Risk Management for Large Banks and the Bank Negara Malaysia's Exposure Draft on Climate Risk Management and Scenario Analysis for example, as well as in this Consultation.

However, there is a fundamental mismatch at play when financial institutions run climate stress tests or scenario analyses that focus on the short-term using as a reference point climate scenarios or IAMs that model pathways over decades to come. It makes little sense to disregard large parts of these models by restricting the analysis to shocks that must occur within the next two years. Pretending that these scenarios do not imply any material shocks by restricting the time horizon waters down the message from the scenarios. We show in Baer et al. (2021) how urgently a risk perspective beyond the business cycle is needed and that the potential financial shocks from a disorderly transition grow tremendously, the longer financial institutions and non-financial companies remain on their current business as usual pathways.

Short-term risk management through forward-looking portfolio alignment metrics

Further guidance is required in relation to the linkage between long-term risk analyses and using more short-term forward-looking portfolio alignment metrics (as one form of scenario analysis) as a risk management tool. Given that scenario analysis is introduced as a key tool for banks, we consider that the remaining principles and/or supporting commentary should provide further detail on how this tool can then be applied in practice to mitigate risks. By way of example there could be more detailed commentary about the linkages between scenario analysis and the mitigation actions that a financial institution can take to limit exposure to transition risk and to assess its materiality to credit, market and liquidity risk (Principles 8-10).

As emphasised by a range of financial sector initiatives, including the Net Zero Banking Alliance, a shorter time horizon is required for some analyses because of the need to make faster initial progress and reduce the risk of emissions overshoot. Forward-looking portfolio alignment metrics (as one form of scenario analysis) are

an important tool in measuring short-term alignment at counterparty, portfolio and national jurisdiction level. Meaningful analysis requires the use of asset-level data to verify planned investment in climate critical sectors, hence capturing non-financial company (**NFC**) ability to transition into the low carbon economy. Sectoral decarbonisation pathways such as the ones produced by the IEA can be used as a benchmark to measure this alignment.

For banks and supervisors, we would encourage adding to Principles 12 and 18 more detail on the implications and use cases for different approaches to climate scenario analysis, with a focus, as recommended by the TCFD, on forward looking metrics and alignment measurement. Many tools have focused on carbon footprint analyses as a proxy for transition risk at NFC level. In our opinion this is an *inadequate* proxy for transition risk as it tends not to be forward looking and as a result does not address the adaptive capacity and transition strategy of NFCs in any meaningful way. Other tools have used coarse sector classifications which may not capture the heterogeneity within sectors appropriately. It is therefore paramount for effective management (and mitigation) of transition risks that scenario analysis adopts a more granular, sector specific focus on decarbonisation pathways and the foresight they can provide.[1]

For supervisors, we would encourage adding to Principle 18 more details on how forward-looking portfolio alignment metrics allow for both a macro insight into climate risks (for which regulatory incentives and policies can be designed to mitigate) as well as micro insights into at risk individual banks. Further, they can consider regional differences using regional scenarios and allow for comparison between jurisdictions. And furthermore, we also consider that measuring climate related risks should not be siloed within certain parts of the financial sector. It is likely that NFCs that are affected by climate transition risks will affect not only banks' positions, but also the portfolios of insurers, pension funds, asset managers etc. Consequently, there may be second order/spill over effects for different actors in the financial market. More coordination is required between supervisors on measuring climate risk and running scenario analyses and stress tests across different geographic regions and with different mandates (e.g. bank and insurance supervisors) to better grasp the interconnectedness of the risks.

Three critical areas of focus for banks and supervisors

Based on the link made between long-term risk management and short-term risk management through forward looking portfolio alignment metrics (as one form of scenario analysis), there are three broad areas of focus that banks and supervisors can seek to action:

- Bank involvement in the provision / arrangement of the new financing which will be required to realise the technological change and investments implied by climate scenarios. Here we refer to the capital requirements to finance the transition, assessed per counterparty based on decarbonisation pathways.
- Bank exposure to high carbon activities that are not aligned with decarbonisation pathways and the assets of which are likely to become increasingly stranded.
- Bank exposure to counterparties that are not taking action to mitigate risk by developing transition plans to ensure their future commercial viability.

[1] In the following, we provide two tangible examples to reiterate the importance of forward-looking asset-based production company at the granular level. (1) Let us consider two oil majors (A and B) with similar past and current production profiles. One can easily see that these two companies may still have widely different risk profiles regarding the transition. If oil major A keeps building out its capacity for oil extraction over the next years and does not branch out into sustainable, low-carbon industries, whereas oil major B plans on shifting its focus for example to renewable power generation, these two companies will likely be subject to very different overall impacts of potential regulation and market pressures in the future. They will each have distinct risk profiles influenced by the shifting economics of fossil fuels and the process of diversifying into a new sector. It becomes clear that analysis of company production and transition plans in those sectors likely to be most affected by climate regulation in the future is an important aspect in understanding where climate risks lie (as based on solely the carbon footprint of the companies' current activities, they would be close to indistinguishable). (2) Similarly, it is important to distinguish NFCs activities at a sufficiently granular level. If we were to look at two companies that operate power utilities and generate and build out the same amounts of electricity, over the next few years, we clearly do not understand which one is more at risk due to a shock to their business model. This requires at least a separation into the current and projected shares of low carbon and high carbon technologies used in power generation for each of the companies. One way to alleviate this is by running bottom-up climate risk analyses that match NFCs' asset-based production capacities and buildout plans to the ultimate owners, using a sufficiently granular sub sectoral technology split. One example for such an analysis on the alignment side is PACTA and 2DII has additionally road-tested financial stress tests and sensitivity model for transition risk with EIOPA.

3. Response to specific questions

Q1. Has the Committee appropriately captured the necessary requirements for the effective management of climate-related financial risks and the related supervision?

We consider that the aspects articulated below merit specific attention to ensure effective management of climate-related financial risks:

A. Risk exposure at sectoral level: To pinpoint hot spots of exposure to high carbon activities or activities which have received insufficient support to transition there is a need for specific focus on climate critical sectors such as power generation, fossil fuel production and automotive.

B. Importance of portfolio alignment measurements and forward-looking metrics: Forward-looking portfolio alignment metrics (as one form of scenario analysis) are an important means to pinpoint hotspots of risk exposure. In this respect a stronger link should be made between scenario analysis and the principles addressing credit, management and liquidity risk.

C. Types of data for conducting analysis: It is important that short-term forward-looking portfolio alignment metrics use asset-level forecasts for economic company activities. This form of data provides improved coverage, back testing and consistent data collection methodologies compared to self-reported company data.

D. Business strategies that can mitigate risk: The principles refer to the adjustment of the business strategies of banks. More detail should be provided on the development of foresight-based strategies to mitigate transition risks. This particularly relates to principles 5, 8-10 and bank involvement in providing new finance for companies in transition. In this respect both the direct financing of activities and indirect services, such as mergers and acquisitions, underwriting and the arrangement of access to capital markets through bond issuance.

E. Scenario selection to assess multiple risk factors: The principles for both banks and supervisors should indicate how combinations of plausible scenarios can support the more comprehensive assessment and mitigation of risk. These could include reference to ‘normative’ scenarios with specific climate goals as well as scenarios which test different combinations of policy interventions and techno-economic assumptions, including the definition of baseline and business as usual scenarios against which to test disruption. At supervisory level an emphasis should also be placed on the identification and selection of plausible regional scenarios to more accurately take into account the regional economic and political context.

Q1. Are there any aspects that the Committee could consider further or that would benefit from additional guidance from the Committee?

We consider that additional guidance on the following aspects would be beneficial:

A. Supervisor co-ordinated scenario analysis: The approach outlined in the principles should be further elaborated to provide guidance on how to carry out scenario analysis exercises at supervisory level to measure and track the scenario alignment and exposure of banks. This could potentially be modelled on 2DII’s PACTA Co-ordinated Projects, in which we have worked with supervisors in Switzerland, Luxembourg and the Netherlands. The guidance could contribute towards ensuring a consistent implementation of scenario analysis at supervisory level as well as creating the potential for capacity building/learning across the sector. The guidance could include technical information on topics such as scenario selection, forward looking metrics and data selection. This aim of the guidance would be to help to ensure consistency in the implementation of scenario analysis amongst participating banks.

B. Choice of model and data in scenario analysis and stress tests: The principles should provide further guidance on adequate choice of models in climate scenario analysis. For example, the selected model and the input data have strong implications on what the results of a climate risk analysis show and what they can be

used for. Depending on the use case for scenario analysis, this means that some models and input data are better suited in a given context than others.

For example, one limitation of the asset-based forward-looking approach is that clear decarbonisation pathways are required for a given climate scenario to calculate targets for sectors and companies. This is not the case for all sectors in the economy however and at the same time forward looking production data may not be available for all sectors. Thus, to stress the whole economy, a sector-based approach that applies a macro shock to all companies in a sector without pathways and applies a bottom-up forward-looking shock in the sectors with production pathways should be considered. For more sector specific analyses, we believe that granular and forward-looking approaches should be used whenever possible though and, in such cases, it may not be necessary to combine approaches.

C. Clearer descriptions of different use cases for scenario analysis and plausible scenario selection: Related to *B. Choice of model and data in scenario analysis and stress tests* it would also be useful to articulate clearer descriptions of use cases for scenario analysis (e.g. analysis of disorderly transitions, analysis of sectoral/technology exposure risk) and related to each case the considerations for how to select and use plausible scenarios. There are already some points of reference in the sector (e.g. NZBA guidance) but each use case may suppose the use of different combinations of scenarios, modelling assumptions and climate goals. For example stress testing and exposure risk assessments may be based on a combination of a baseline stated policy scenario and an ambitious scenario that sets a target level. Comparative alignment measurement at supervisory level could be informed by selection of Paris Agreement aligned scenarios with consistent climate goal probabilities.

Q2. Do you have any comments on the individual principles and supporting commentary?

We have the following specific comments in relation to the individual principles and supporting commentary.

Principle 1: The focus on a bank's strategy and business model is framed in terms of risk resilience. Whilst a good starting point, reference should also be made to how changing a bank's business objectives to contribute to the transition could improve risk resilience and reduce exposure to the impact of structural economic changes.

Principle 6: This principle could be framed as a more overarching process that encompasses several of the other principles and is informed using specific tools such as scenario analysis (Principle 12). Paragraph 25 is critical as a first reference to concentration of material risks relating to sectors and geographies, but this focus on exogenous factors should be referred to throughout.

Principles 5, 8-10: These principles could be re-enforced by strengthening reference to how credit, market and liquidity risks relating to transition could be more effectively addressed by obtaining a better understanding of sectoral and technology exposures. This is particularly the case for high emitting activities such as power generation, fossil fuel production and automotive, which are most likely to be affected. The reference to '*metrics or heatmaps to assess and monitor concentration of exposure to geographies and sectors with higher climate-related risk'* is critical. As noted under Principle 6, such references to assessment of their concentration of exogenous factors, as well the reference in Paragraph 34 to the consideration of mitigation options, should be given more prominence.

Principle 9: More emphasis could be placed on how market risks could arise from a disorderly transition and how they could be better understood and analysed using scenario analysis tools. Scenario sets such as the one created by NGFS are designed to aid financial institutions in seeking to do this.

Principle 12:

- It is stated that banks should make use of scenario analysis and stress testing 'where appropriate.' It is unclear what this qualification means, and the supporting commentary does not provide any further clarification. At worst, this qualification removes the imperative to carry out scenario analysis and stress testing. Considering developments regarding the TCFD Framework (and the scenario analysis

elements thereof) and national regulatory changes (e.g. in the UK and elsewhere) in relation to establishing specific requirements in relation to scenario analysis, we consider that this qualification should be clarified by instead focussing on when it should be used.

- The primary use of scenario analysis is expressed as relating to testing the resilience of business models and strategies to a range of plausible climate-related pathways and to determining the possible impact on a bank's risk profile. The missing element from this framing is reference to the use of scenario analysis to assess mitigation strategies and possible changes in exposure profiles, with measurement of portfolio alignment using forward looking metrics representing one of the main ways in which scenario analysis can be used to do this. Mitigation strategies are likely to require changes in the balance of exposure to different sectors, technologies and activities, so this will need to be fully reflected in assessment against risk management parameters.
- As referred to above, it would also be useful to articulate clearer descriptions of use cases for scenario analysis (e.g. analysis of disorderly transitions, analysis of sectoral/technology exposure risk, analysis of portfolio alignment improvements) and linked to this the considerations for how to select and use plausible scenarios. There are already points of reference e.g. NZBA guidance.
- The reference to shorter time frames is another strong point but here we miss a reference to the main relevant form of scenario analysis on this time horizon – namely portfolio alignment measurement using forward-looking metrics and granular business intelligence data on production/investment. This links back to our general point on what type of scenario analysis is to be carried out.
- The supporting commentary should reference that scenario analysis and stress testing should both be used to provide a better understanding of sectoral and technology exposures as a means of better understand the 'crystallisation' of risk (and opportunities to mitigate). Furthermore, the supporting commentary could already specifically identify sectors which are critical to risk mitigation.

Principle 13: The supporting commentary (in paragraphs 49-50) refers to risk management via business strategies and corporate governance and controls. The missing element from this framing is assessment of the extent to which banks are adjusting their business strategies to contribute to the transition and assessing their resilience to and exposure to the impact of structural economic changes identified in scenarios.

Principle 15: Similarly to our comment in respect of Principle 12, it is unclear what the qualification 'where appropriate' means and the supporting commentary does not provide any further clarification. We consider that this qualification should be clarified and improved to include assessing the materiality of risk and identifying opportunities to mitigate transition risk.

Principle 18:

- We have similar comments as those articulated above for Principle 12. In addition to the need to strengthen the focus on use cases for scenario analysis, with specific attention on alignment measurement on a short time horizon and stress testing on a longer horizon to size exposures, there should also be a focus on the potential for supervisors play an ongoing role in tracking the effectiveness of mitigation measures taken by the sector and for engagement with banks to build their capacity and expertise.
- An emphasis should be placed on the identification and selection of plausible regional scenarios, which can then be used to downscale the global transition risks more accurately to reflect the regional economic and political context. Here is where the dialogue with scenario developers could be valuable to provide this regional adaption and to support comprehensive assessments.
- In addition to a focus on scenarios, attention will also be needed on portfolio tracking and metrics for measurement of both exposure and alignment.

Q3. How could the transmission of environmental risks to banks' risk profiles be taken into account when considering the potential application of these principles to broader environmental risks in the future? Which key aspects should be considered?

No response.

References

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