



Climate Change Stress Testing Challenges

The four biggest challenges for banks (1/2)

The PRA's first comprehensive climate change stress test, which will take place in 2021, remains a challenge for many participants. The four biggest challenges which are being experienced by banks are outlined in the following two slides.

1 Strong need of new data requirements

Banks must fill their **data gaps** on climate risk as the data they currently have in-house is likely to not be **sufficiently granular or reliable** for climate risk analysis.

- Banks might not hold sufficient data on **borrower asset locations**, which is required for climate risk modelling.
- There is a lack of a clear and widely accepted **taxonomy for "green" and "brown" assets**.
- **CO2 emissions** and climate-related data need to be more consistent **across jurisdictions and sectors** to undertake comparable risk analysis.

Examples

- When originating loans, banks **might not collect data** that is relevant for climate risk analysis or with sufficient granularity, **such as geospatial data** (location of the counterparties' assets, suppliers and sales).
- The Task Force on Climate-related Financial Disclosures (**TCFD**), which requires counterparties to **disclose and translate** environmental information for third parties, is **not yet consistent** across sectors and jurisdictions.

2 Quantification and measurement of climate change risk

Banks are facing difficulties to assess and map climate risk **transmission channels** to the financial sector.

- There is currently **insufficient understanding on how climate risk** and the transition to a low-carbon economy will impact the financial sector.
- The current work and research on climate risk transmission channels is still at an **early stage** and there are challenges in modelling how climate risk will **materialise with precision**.
- Banks **have limited experience in understanding and capturing** transmission channels for both physical and transition risk.

Examples

- Banks **have performed very few case studies** to measure the impact of climate risk. There are only a handful of reports that quantify the **impact** on the **long-term mortgage exposure** of a scenario where sea levels would affect the value of coastal properties.
- For transition risk, banks have begun **to analyse the impact on corporate behaviour** from the introduction of **the carbon tax**.



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In addition to data and quantification issues, many banks are facing problems when modelling climate risk, especially due to the lack of specialised resources on the topic.

3 Modelling and methodological approach

Currently, there is no **robust and widely-accepted analytical framework** for assessing climate-related financial risk. Therefore, Banks are **struggling to adopt and develop modelling methodologies** that will fit their organisations and local regulator.

- Given that the **techniques and methodologies** regarding climate risks are **evolving** in complexity, they tend to be heavily influenced by **each specific regulator** (e.g. PRA, EBA, FED).
- Uncertainties in **modelling the impact of climate change** are accentuated or mitigated depending on the **speed and nature of innovations, political actions and environmental effects**.

Examples

- Regulators do **not require** stress-test participants to follow a **prescribed modelling methodology**. Nevertheless, from its latest update, the PRA expects participants to perform a **counterparty-level assessment** to cover at least **80%** of their exposure to corporates.
- Banks, which are more familiar in using top-down satellite stress test models, will face **difficulties to identify and implement a specific modelling methodology** for climate risk.

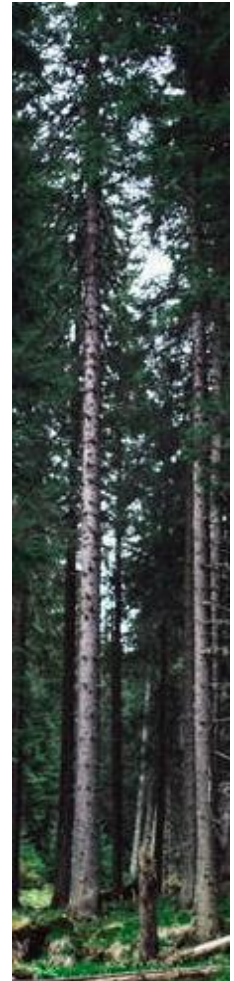
4 Resources and climate risk specialists needed

Banks currently **do not have the resources** required to successfully **perform the PRA climate change stress test**. They must **strengthen their internal coordination** and **hire climate risk specialists**.

- Banks require a strong **level of joint coordination** (among **credit officers, modellers and climate risk experts**), when executing the climate change stress test, especially if they are required to perform a counterparty-level assessment.
- Banks should hire dedicated **resources with advanced expertise on climate risk**, especially in the area of modelling and counterparty assessment.

Examples

- Generally banks have started to plan their capability enhancement to manage climate risk. However, as the first climate change stress-test is approaching, banks are **struggling to have the right resources to adequately perform the stress test exercise**.
- For counterparty-level assessment, there is **uncertainty** on how **credit officers, modellers, and climate risk experts** will **collaborate** in order to perform the required tasks.





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