HYMANS ROBERTSON

Newsflash

Climate change: The 2021 Biennial Exploratory Scenario

At the end of last year, the Bank of England ("BoE") issued a discussion paper on its proposals for stress testing the financial stability of insurers and banks under future climate change scenarios. This stress test exercise for large banks and insurers is referred to as the "biennial exploratory scenario" or "BES".

If adopted, this stress test exercise will go far beyond the stress testing already undertaken across the industry, including in the 2019 Insurance Stress Test from the Prudential Regulation Authority ("PRA").

Under the current proposals, climate scenarios would dictate input variables for firms' modelling and the onus will be on the firm to perform a "bottom-up" assessment of how their individual counterparty exposures respond to changes in these variables. These variables span "climate" (think future emissions levels), the "macro-economy" (e.g. GDP growth) and more traditional "financial" variables (such as government bond yields).

Additionally, firms will be required to set out the actions they may take in each of the scenarios – not only to mitigate the risks, but also to respond to new business opportunities.

Below is a summary of our key takeaways from the document.

The Biennial Exploratory Scenario: in numbers

3 scenarios: early action, late action and no action

2 phases: sizing the risks ("how do assets and liabilities change?") and sizing the response ("what actions will you take?")

Assessment will be carried out over a **30-year** time horizon

30 June 2020 date at which snapshot of balance sheet is taken for the stress tests

Assessment carried out at **5-year** time intervals over test horizon (e.g. 2020, 2025, …)

Firms' top **50** counterparty exposures will require detailed breakdown of modelling and assumptions

3-4 months: time provided to complete stress test exercise once issued

Publication of results by the Bank of England in **2021**

What are the scenarios?

The scenarios in this exercise are defined in terms of the pace of the policy response adopted across the industry. In turn, the pace of response dictates the transition pathways and, ultimately, the real-world climate outcomes.

Early policy action scenario

- ✓ "Early" and "decisive" action taken
- ✓ Gradual shift to carbon-neutral economy
- ✓ Structural reallocation but no macroeconomic "shock"
- ✓ Warming limited to below 2°C

Late policy action scenario

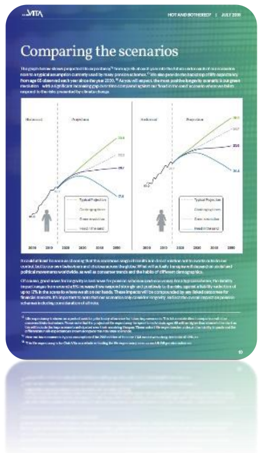
- × 10-year delay in response
- × Sudden & abrupt adaptation required to meet targets
- × Sharp repricing leads to macroeconomic shock
- ✓ Warming still limited to below 2°C

No additional policy action scenario

- × No policy response
- × Companies/consumers make no changes to reduce emissions
- × Temperatures increase well beyond 2°C target
- × Physical risks increase significantly

The BoE's approach mirrors methods that we have seen adopted elsewhere across the industry, e.g. in the scenarios included in the World Energy Outlook by the International Energy Agency.

This is also aligned with our own thinking in constructing climate scenarios. For example, Club Vita's Hot & Bothered paper on longevity scenarios considered three different scenarios – "Head in the sand", "Challenging times" and "Green revolution".



Our recent work to extend this analysis – to consider economic impacts – defined scenarios in terms of the pace of government and corporate response, in terms of policy, technological and strategic change.

Climate risk is now a daily news item. We continue to see both environmental impacts of climate change and the societal response, with individuals and campaign groups promoting the need for action. However, we strongly believe that it is governments that need to provide leadership through concerted policy action in order to create the necessary change. We believe that framing scenarios with reference to the timing of policy action is a sensible approach for both the BoE and others who are constructing climate related scenarios.

From narratives to impacts

The scenario narratives, defining the type of world we will be living in, are translated into real-world impacts using a number of key variables. The BoE have provided an indicative list of the kinds of variables that will be included in the scenario specification, namely:

- **Physical variables:** temperature pathways; frequency/severity of flooding; impact on longevity.
- **Transition variables:** carbon price pathways; energy prices; commodity prices.
- **Macroeconomic variables:** Real GDP growth; inflation; central bank rates; property values.
- **Financial market variables:** government bond yields; equity index levels; FX rates.

The BoE is seeking to calibrate each of the variables consistently under a given climate scenario. So, for example, the "Early policy action" scenario will have a defined temperature pathway (likely to be a *lower* warming pathway), an associated carbon price (likely to be a *higher* carbon price) and a consistent assumption about the impact on variables ranging from inflation to equity prices (e.g. will a carbon tax increase inflation in the short term?).

Obviously, the precise impact of these variables on individual counterparty exposures could vary greatly and cannot be covered in centrally prescribed scenarios. The BoE has stated, however, that firms are expected to carry out "scenario expansion" to encompass any additional variables required to assess their own individual counterparty exposures.

It notable that the BoE will also require insurers to consider the liability side of the balance sheet (e.g. implications on longevity), which represents a clear development since the 2019 Insurance Stress Test exercise.

What do firms need to submit?

The BoE has noted that the template for the 2021 BES will be more detailed than that used for the 2019 Insurance Stress Test.

The **first phase** of the exercise is focussed on assessing the magnitude of the financial risks firms face, based on their balance sheet position as at 30 June 2020. The key metrics for insurers are:

- **Impact on liabilities:** Best Estimate Liabilities, Risk Margin, Transitional Measure on Technical Provisions and any other liabilities.
- **Impact on assets:** market values of investments and knock-on impact on Own Funds and surplus.
- **"Other" impacts:** to include the impact on the Matching Adjustment portfolios, with-profits funds and any other relevant Solvency II metrics.

Participants will also be asked to assess the current *"temperature alignment"* of their investment portfolios, i.e. to perform an assessment of the activities of their current counterparties (e.g. emissions intensity of their operations) and the degree to which these are aligned with the current Paris Agreement target of 2°C warming. This will be clearly be new territory for many insurers and will require a thoughtful approach beyond that which has been expected in the past, although the BoE does note that it will not be prescriptive in the approach that firms must adopt.

The **second phase** of the exercise focuses on how respondents expect to react – namely the management actions they expect to take – in response to the risks (and potential opportunities) identified in the first phase.

The true insight will come when the BoE aggregates responses at an industry level to consider the overall resilience of the financial system. This analysis will allow the Bank, and industry more widely, to identify inconsistencies in assumptions, assess the feasibility of planned management actions at industry level and consider whether enough is really being done.

What next?

The BoE is currently seeking responses to the proposals set out in the paper and firms will have the opportunity to do so until 18 March 2020.

Following the consultation, the BoE expects to issue the scenarios in the second half of 2020, at which point participants will have around 4 months to complete the exercise. Results are expected to be published in 2021.

This proposal set out by the BoE goes beyond what many firms have done before, and the timescales involved may pose a challenge for firms who are not well-prepared for the exercise.

In this latest development, the Bank of England is continuing its leadership on climate change by considering the resilience of insurers and the consequent stability of the financial system.

This is a clear step forward from the 2019 Insurance Stress Test exercise and shows that the consideration of climate risk is likely to continue evolving over the coming years.

We would be delighted to support you in developing your approach to assessing and managing your exposure to climate risk – leveraging the recent work we have done on both longevity and economic impacts under various climate related scenarios.

If you would like to discuss with one of our specialists, please get in touch.

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